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2015

Does Role Overload Predict Academic Achievement in Associate Degree Nursing Students?

Sharalyn Wight

DOES ROLE OVERLOAD PREDICT ACADEMIC ACHIEVEMENT IN ASSOCIATE
DEGREE NURSING STUDENTS?

DISSERTATION

Presented in Partial Fulfillment of the
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Barry University

Sharalyn Wight

2015

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By

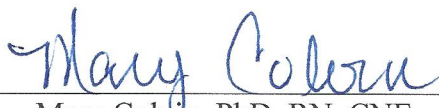
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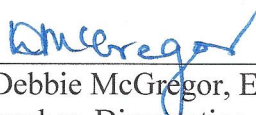
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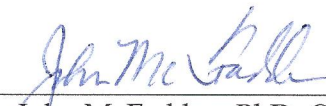


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Abstract

Background: The nursing shortage has been a well-documented problem since the 1950s. The United States is predicted to need an additional 1.2 million nurses by 2020 (United States Department of Labor Bureau of Labor Statistics, 2011), and the number of nursing graduates is too low to keep pace with the projected need. Therefore, educators must focus on improving nursing student performance in order to provide a pool of well-prepared, diverse, and qualified candidates to provide quality patient care. Although typical academic predictors of attrition remain important, identifying psychosocial factors that put students at risk may allow educators to improve student achievement and reduce attrition.

Purpose: The purpose of this predictive cross-sectional correlational study was to examine role overload as a predictor of academic achievement as measured by semester points and semester HESI score in associate degree nursing students enrolled in semesters I-V. It also examined the relationship between selective demographic variables (age, gender, and ethnicity), hours worked, hours studied, and caregiving hours as potential indicators of role overload.

Theoretical Framework: The Role Theory/Overload Theory of Robert Merton (1957) was used to guide this study.

Methods: A cross-sectional correlational design was selected for this research study to examine the relationship between the independent variables (role overload score, work hours, caregiving hours, and study time) and the dependent variables (semester points and semester HESI scores). The participants were asked to complete a demographic tool and role overload questionnaire by Michael Reilly (1982).

Results: Role overload, study hours, work hours, and caregiving hours were not significant predictors of academic achievement, although caregiving hours of greater than 40 hours was significantly related to academic achievement. There was a significant relationship between role overload scores and work hours, study hours, and caregiving hours. Gender is the demographic variable most strongly associated with role overload.

Conclusion: Caregiving hours was associated with greater role overload and poorer academic achievement. Nursing programs may be able to impact student attrition and the nursing shortage by targeting this at risk group for early remediation and additional supportive resources.

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DEDICATION

I would like to dedicate this work to my Lord and Savior, who has blessed me with daily guidance, grace, and eternal salvation. I would also like to dedicate this dissertation to my past, current, and future students. I find them to be perpetually motivating, challenging, and inspiring. The strong desire to help them achieve their academic potential is what provided the driving force for completion of this dissertation.

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CHAPTER ONE

The nursing shortage has been a well-documented problem since the 1950s and, despite intermittent relief, is a challenge expected to continue into the next decade. Because nurses provide the majority of direct healthcare to patients, a shortage of nurses will impact recipients and providers at all levels of the healthcare system. Nursing program attrition rates of 20-50% across the United States are a significant factor contributing to the nursing shortage. Rouse and Rooda (2010) project the current number of nursing graduates is too low to keep pace with the projected need. With the current and projected nursing shortage nationwide, it is of the utmost importance for nursing educators to reduce attrition and improve the achievement of nursing students in order to attract, retain, and graduate students who can successfully enter the nursing workforce and provide quality patient care.

The purpose of this predictive cross-sectional correlational study was to examine role overload as a predictor of academic achievement. Academic achievement was measured by semester points (total grade points earned during the semester), and semester Health Education System, Inc. (HESI) scores in associate degree nursing students enrolled in a five-semester program. It also examined the relationship between selective demographic variables (age, gender, and ethnicity), hours worked, hours studied, and caregiving hours as potential indicators of role overload. With the current and projected nursing shortage nationwide, it is of the utmost importance for nursing educators to improve the achievement of nursing students in order to attract, retain, and graduate students who can successfully enter the nursing workforce and provide quality patient care.

Background of Study

The literature regarding the nursing shortage dates back to the early 1950s when Spohn (1954) reported that the nursing profession had a recurrent shortage of manpower. While shortages in other professions such as business and teaching tend to be temporary and identifiable, the nursing shortage is described as complex and multifaceted, and not as responsive to the economic dynamics of supply and demand (Fox, 2009). Because the nursing shortage and its meaning have not been well defined, it is both difficult to measure and to track (Kaestner, 2005; Spetz, 2005). Despite the lack of objective measurement, it is widely agreed that the nursing shortage exists and persists. Factors such as low pay, challenging work environment, and understaffing were found to be the primary reasons for early departure (Elgie, 2007). Nurses do leave the workforce and unless nursing education programs meet and exceed this deficit, the shortage will continue to increase (Buerhaus, Staiger, & Auerbach, 2000). A main obstacle to graduating qualified nurses into the workforce to address the nursing shortage is the 20 to 50 percent student attrition rates experienced in nursing programs across the country (Buchan, 2006; Peterson, 2009).

Nursing Shortage

The United States Department of Labor Bureau of Labor and Statistics (BLS) (2011) projected the need for 495,000 replacements in the nursing workforce, bringing the total number of job openings for nurses due to growth and replacements to 1.2 million by 2020. BLS predicts the number of nursing jobs will grow from 2.62 million in 2008 to 3.2 million in 2017, a 22 percent increase. At the same time 458,000 will leave the profession. By 2020, the RN workforce will be approximately 20% below projected

requirements (Robert Wood Johnson Foundation, 2010). A grant report by the Robert Wood Johnson Foundation stated the nursing shortage is a result of increasing career options for women, an aging workforce, unsatisfactory working conditions, and a decrease in minorities and younger people attracted to the profession (Robert Wood Johnson Foundation, 2010). Due to the aging of the Baby Boomer population, the need for healthcare is expected to continue to grow. While the need for nurses increases, nursing schools are struggling to expand capacity to meet the rising demand (Buerhaus, Staiger, & Auerbach, 2000).

The shortage of nurses has been affected by a reduced number of students entering the profession in the last half century and seeking other career opportunities, as well as nurses exiting the profession altogether. Factors such as low pay, challenging work environment, and understaffing were found to be the primary reasons for early departure (Elgie, 2007). As the population ages so does its workforce. Nearly half of RNs are projected to be over age fifty by 2010, and their replacement is not expected to keep up with the demand (Buerhaus, 2008; Fox & Abrahamson, 2009). Although older nurses returning to the workforce has temporarily alleviated the nursing shortage, this is not expected to have a lasting impact on the shortage. The lack of new nurses in the pool of new hires indicates that the foundation of the shortage still exists (Buerhaus, 2008; Fox & Abrahamson, 2009).

The nursing shortage has improved somewhat since 2002 with the help of improved public perception, emphasis on recruitment, and loan forgiveness programs, but the economic downturn from 2010 to present has negatively affected the job market for new graduates (Buerhaus, 2008; Fox & Abrahamson, 2009). In many, but not all,

geographic areas, hospitals have significantly reduced hiring. With the availability of experienced nurses, nurse leaders are more cautious about employing new graduates to fill vacancies (Sherman, 2012). Some of the shortage has also been eased by an influx of foreign-born nurses. The United States is the largest global importer of foreign nurses, which further substantiates the position that the supply is inadequate (Buerhaus, 2008).

Buerhaus (2008) also warns that although current RN numbers appear optimistic, the shortage is expected to continue and exacerbate as the population of the United States ages and healthcare reform improves access to healthcare, thereby further increasing the need for nurses. The lack of new nurses in the recruitment pool indicates the underlying nursing shortage still exists (Buerhaus, 2008). The impending and continuing projected nursing shortage is further reason to increase retention efforts of those students that have met the admission standards for nursing programs.

Needleman (2011) published findings that suggest insufficient nurse staffing was related to higher patient mortality rates. The data showed that mortality risk for patients was about 6% higher on units that were understaffed as compared with fully staffed units. A study done in California hospitals found that the state's better nurse staffing levels produced significantly lower risk-adjusted mortality Aiken (2010). Patient rescues involving patients with complications were also better than the comparison states, even after taking into account factors other than differences in nurse staffing (Aiken, 2010). The majority of RNs (79%) and Chief Nursing Officers (68%) believe the nursing shortage is affecting the quality of patient care in hospitals, long-term care facilities, and ambulatory settings. Most hospital RNs (93%) report time constraints due to poor

staffing that result in decreased patient safety, inability to detect complications early, and reduced collaboration with fellow healthcare professionals (Buerhaus, 2008).

Associate Degree Nursing Programs

Associate degree nursing programs were developed to address the nursing shortage after World War II. Hospital diploma programs had been the primary source of new graduates but were unable to meet the demand. President Harry Truman appointed a national commission on Higher Education to increase the expansion of community colleges and increase the number of people prepared at the technical and professional level (Orsolini-Hain & Malone, 2007). A central mission of the community college system was to serve the community in which it was situated, and it provided a convenient and affordable access to education to individuals for whom it may have otherwise been unobtainable. The National League of Nursing played a key role in supporting the education of nurses at two-year institutions. The initial nursing programs attracted students who were considered nontraditional and typically ineligible for admission to the hospital diploma and baccalaureate programs (Orsolini-Hain & Waters, 2009). The establishment of associate degree nursing programs was considered successful and by 1980, associated degree nursing programs accounted for approximately 80% of new graduates. A proliferation of associate degree programs created more than 800 programs in the nation. By 2013, the growth of associate degree programs had grown significantly and supplied approximately 60% of Registered Nurse graduates (NLN, 2006). Associate degree programs serve to educate and provide nurses quality patient care that helps to alleviate the nursing shortage and provides opportunities to an underserved and diverse population of patients (Orsolini-Hain & Malone, 2007). The

Institute of Medicine (IOM) recommends increasing the proportion of Bachelor of Science Nurses (BSN) to 80% by 2020 (IOM, 2010). Improving attrition rates at the associate degree level will help meet this national healthcare initiative. The associate degree program chosen for the study is representative of a multicultural student population that has a significant proportion of nontraditional students who are married, working, and caring for dependents.

Psychosocial Factors

Studies done in the United Kingdom have highlighted psychosocial factors such as financial difficulties, family issues, transportation challenges, and lack of support as major contributors to nursing student attrition (Brodie, Andrews, Wong, & Rixon, 2004; Dante, Fabris, & Palese, 2013; Pryimachuk, Easton, & Littlewood, 2008). However, Wells (2003) noted a scarcity of research on nursing student attrition in the United States. Many researchers have concluded that educators must address the non-cognitive predictors for student attrition in addition to the traditional cognitive/academic predictors (Braxton, Brier, & Hossler, 1988; Cariaga-Lo, Enarson, Crandell, Zaccaro, & Richards, 1997; Clewell, B., DeCohen, C., Sterding, N., & Tsui, L. 2006; Schmidt, N., Keeney, J., Oswald, F., Pleskac, T., Billington, A., Sinha, R., & Zorzie, M. 2009). Glossop (2002) identified personal difficulties, family concerns, and financial challenges as primary contributors to nursing student attrition. Additionally, Johnson et al. (2009) highlighted the importance of developing a valid tool to identify students at risk for attrition early in the nursing program by assessing both cognitive and non-cognitive risk factors. The key roles played by early identification of academic and psychosocial factors emphasize the need for instruments that can identify and address risk factors early in the nursing

programs. There is evidence in the literature that supports increasing students' awareness of the effects of psychosocial factors may also improve student retention (Williams, 2010).

Diversity

The American Association of Colleges of Nursing (AACN) issued a position statement in 1997 stating that due to the increasing diversity of the population in the United States, diversity training must be included in nursing education. The recruitment of diverse students must also be increased (AACN, 1997, 2013). Despite this position statement, minorities continue to be underrepresented in nursing (Burruss & Popkess, 2012). Efforts to increase the diversity of the nursing student population have met with high attrition rates (Davidhizar & Shearer, 2005). High attrition rates among nursing students, especially among underrepresented minorities, have hampered efforts to improve workforce diversity (Childs, Jones, Nugent, & Cook, 2004). As of March 2000 there were an estimated 2,696,000 licensed registered nurses in the United States, and only about 16% were ethnic minorities. This data is indicative of an underrepresentation of minority nurses in the workforce (Stewart, 2005). As the population becomes more diverse, it is imperative that the nursing profession produce a more ethnically diverse profession in order to better reflect the cultural composition of the community it serves (Childs et al., 2004). Hill (1998) and Mulholland, Anionwu, Atkins, Tappern and Franks (2008) found that all ethnic and culturally diverse groups (Blacks, Hispanics, Asian/Pacific Islanders and American Indians/Alaskan Natives) are underrepresented in all nursing practice areas, including clinical sites, education, and research. Furthermore, it is projected that a large majority of the nursing jobs in the 21st

century will be in nontraditional settings such as community-based facilities, ambulatory clinics, and home settings that will consist of a diverse multicultural population (Stewart, 2005). Barriers faced by minority nursing students include inadequate academic preparation, financial need, and poor English skills. These and other potential psychosocial factors may prevent successful completion of nursing programs (Zuzelo, 2005). Efforts to identify and implement effective strategies to recruit and retain minority students in nursing education programs must be a top priority to align with the goals of the American Nurses' Association (Hill, 1998; Mulholland et al., 2008).

While ethnic diversity is increasing in the United States, the underrepresentation of these cultural groups and the lack of diversity in the healthcare profession continue to be a problem (Gardener, 2005). High attrition rates among underrepresented minority nursing students have compromised the profession's ability to improve workforce diversity (Childs et al., 2004; Wells, 2003). Family, work and financial difficulties have also been recognized as a source of stress and poor educational outcomes in Hispanic nursing students experiencing higher attrition rates (Alicea-Planas, 2009). The National Advisory Council on Nurse Education and Practice (2000) reports that attrition rates for minority students are disproportionately high and must be addressed in order to improve ethnic diversity. Increased attrition among culturally diverse nursing students has the potential to negatively impact the cultural diversity of the profession (Gardner, 2005).

Nontraditional Students

In addition to nursing program attrition rates, educators also face a changing student population. In both baccalaureate and associate degree nursing programs there have been increases in the number of nontraditional adult students who are often second-

career individuals, with some holding bachelor's degrees and master's degrees in another field (Tanner, 2003). Another key characteristic distinguishing nontraditional students from other college students is the high likelihood that they experience significant other life roles that compete with the student role while attending school (Ross-Gordon, 2007). These competing roles include those of worker, spouse, partner, parent, caregiver, and community member. Although these roles can be assets, they can also present additional challenges in students' allocation of time related to course work (Ross-Gordon, 2007). Students who considered themselves employees first were more likely to be married, leaving them with at least three life roles to manage while attending school (Ross-Gordon, 2007). A number of studies report a growing trend toward nursing students combining full-time study with part-time work. Some researchers have found that high levels of paid employment have a negative impact on academic performance (Rochford, Connolly, & Drennan, 2009). Mature and nontraditional nursing students are also more likely to be disproportionately represented in lower socioeconomic groups. Therefore, it is not surprising that work, financial constraints, and childcare issues have been associated with higher attrition rates in non-traditional nursing students (Cuthbertson, Lauder, Steele, Cleary & Bradshaw, 2004).

Consequently, researchers have recommended the assessment of the needs of the nontraditional adult nursing student in order to design conceptually and empirically based strategies to enhance the educational success of this growing population (Zuzelo, 2005). Nursing programs attracting and admitting older nontraditional students must address and meet the needs of this unique group by recognizing the shift and considering the implications for course planning and outcomes. Therefore, there is a need for

descriptive data on how nursing students are spending their time and how it affects course success and ultimately program success. One study found age, marital status, and number of children to be contributing factors to attrition (Potolsky, Cohen, & Saylor, 2003). Additionally, typical indicators of success such as GPA and entrance exam scores are not as predictive for this group of students; therefore, other predictors need to be identified (Bryant, 2001).

Three well-documented studies have investigated demographic characteristics and academic factors contributing to nursing program attrition and National Council Licensure Examination-Registered Nurse (NCLEX-RN) failure (Glossop 2002; Potolsky, Cohen & Saylor, 2003; Peterson, 2009). However, the majority of these studies did not examine associate degree nursing students and nontraditional nursing students, and none of them examined the effects of student role overload and its relationship to attrition. NCLEX exams are taken upon completion of a nursing program and just prior to beginning practice and would not provide information helpful to decreasing attrition in the nursing program itself. Nevertheless, Zuzelo (2005) found that identifying students to be at risk does not preclude success in nursing programs and on the NCLEX-RN and suggests that early identification of at risk students may increase student success.

Role Overload

The following studies on role theory and role overload have been conducted and published in the literature in business, sports, consumer practices, and nursing.

Oney may (2008) examined role conflict's effect on stress and performance and found both low and high levels of stress to be correlated with decreased performance.

MacKenzie, Podasakoff and Ahearnn (1988) found both role ambiguity and role conflict

to be related to motivation and job performance. Singh (1998) found moderate stress and/or role conflict was associated with superior performance, while low levels of role stressors can undermine performance.

Beauchamp, Bray, Eyes, and Caron (2002) examined the effect of role conflict on athletes and found it to be related to lower performance levels. Eyes & Carron (2001) utilized role theory to determine the consequences of not fulfilling role responsibilities and its effect on self-efficacy. Three studies done on differentiating between role conflict and ambiguity (Eyes & Caron, 2001; Beauchamp et al. 2002; Oneyemah, 2008) did not find evidence to support a correlation between role conflict and role performance and recommended that further research should be done. Role theory has also been used to examine consumer practices. Reilly (1982) found an association between role overload and convenience food consumption. Oneyemah (2008) also established a correlation between role overload and consumer practices.

A study done by Home (1998) found that women with jobs and families enrolled in adult education, social work, or nursing identified the perceived intensity of student demands as the strongest predictor of conflict and role overload, with family and job demands coming next. Universities are seeing increased numbers of adult learners who must manage concurrent roles in the family, workplace and community (Home, 1998). The pressures of achieving academically, performing in the workplace, and maintaining family and personal responsibilities are equally important to these students. The effect of stress from the domains of work and home cannot be separated (Chapman & Orb, 2001). The role overload concept takes stressors from multiple sources and expresses them as a single entity.

Role overload overlaps much of the research in the literature that has been done on role stress. Lambert and Lambert (2001) conducted a literature review on role stress in nursing and found several commonalities. The key areas identified by the studies can be grouped as work environment factors such as lack of control, high job demands, and low supportive relationships. Lack of essential resources, poor staffing, and work overload were noted by Chang and Hancock (2003), as well as role ambiguity that related to job dissatisfaction. Role stress, in particular, work overload, has been reported as one of the main reasons for nurses leaving the workforce (Chang, Hancock, Johnson, Daly & Jackson, 2005).

In a study (Wu, Chi, Chen, Wang, & Jin, 2010) done on Chinese nurses to investigate factors associated with occupational stress among female hospital nurses in China, psychosocial factors were examined. A cross-sectional study was conducted using a sample size of 2613 nurses in the Liaoning province using the Chinese version of the Personal Strain Questionnaire. Role boundary and role insufficiency, which are related to role overload, were found to be the most robust indicators of occupational stress (Wu et al., 2010).

A study done by Fong (1984) on burnout among nursing educators looked at stressors such as lack of adequate support and role overload. A questionnaire was sent to 156 full time nurse faculty members on eight campuses of California State University. The response rate was not provided; however, the participants reported significant stress related to time pressure and job demands. These findings support previous research findings indicating that role overload is a primary stressor for nursing faculty members.

The author concluded that attempts to alleviate burnout in nurse educators must address the degree of role overload and/or lack of faculty support (Fong, 1984).

Role overload has also been studied in combination with role strain and role conflict in the academic setting (Gillespie, Walsh, Winefield, Dua & Stough, 2001). Role researchers agree that role stressors are made up of three related constructs: role overload, role ambiguity, and role conflict. Role overload exists when role expectations are greater than the individual's abilities and motivation to perform a task. Role conflict has been characterized as having inadequate resources, while role ambiguity is related to lack of clarity within the role (Gillespie et al., 2001).

A study conducted by Chou and Robert (2008) on assisted living healthcare workers examined the relationship between role overload, workplace support and job satisfaction. The authors defined the job stressor of role overload as employees' demands exceeding their abilities to successfully complete their duties. The results of the study indicated that institutional support, coworker support, and role overload are each independently associated with job satisfaction. They found workplace support was not enough to buffer the relationship between role overload and job satisfaction, and that reducing work load and changing work duties to decrease role overload may also be indicated (Chou & Robert, 2008)

The scant literature on role theory and the component of role overload in the nursing literature is associated with role ambiguity, conflict, and overload and its relationship on burnout in practicing nurses (Chang et al., 2005). Ramage (2002) examined the multiple roles of nursing faculty in terms of their clinical, teaching, and administrative responsibilities and how that was related to role conflict and role overload.

Dasgupta (2012) studied role ambiguity, conflict, and overload and their effects on burnout. Brookes, Davidson, Daly and Halcomb (2004) used role theory to support their research on the varied and numerous roles and their effects on the community health nurse. There is a noted gap in the literature utilizing role theory, and specifically role overload, in the nursing student population.

Attrition

Nurse educators continue to face growing concerns about lower academic achievement and higher attrition rates among associate degree nursing students. As the number of students at risk increases, retention rates have become a focal point for institutions of higher education. Fowler and Norrie (2009) found that multiple factors lead to student attrition and the use of an attrition risk prediction tool may reduce attrition. While attrition among nursing students is not a new phenomenon, there is little research focusing on its identification, prevention, and ramifications. Much of the research has been descriptive and little theoretical understanding of attrition has been gleaned (O'Donnell, 2009). Attrition rates are difficult to report due to the differences in reporting mechanisms of various institutions. There is a lack of agreement on a standardized definition for attrition, though it is commonly defined as the difference between number of students beginning each cohort and the number who complete that same cohort (Glossop, 2002).

Nursing programs exist to educate and graduate nursing students that are prepared for licensure and entrance into the professional workforce. Nursing education is expensive and time consuming, and attrition consumes valuable and limited resources without the benefit of graduating nurses. Nursing attrition is costly in terms of

institutional, economic and human resources. The number of students being enrolled and graduated is too low to keep pace with the future needs of healthcare without factoring in the additional burden of attrition (Peterson, 2009; Stickney, 2008). Approximately 30% of students who begin a baccalaureate nursing program do not graduate (Peterson, 2009). The cost of failing nursing students is estimated to be \$785,000 per institution per year (Murray, 2002). With 2500 associate and baccalaureate nursing programs throughout the United States, this could be a 2 billion dollar per year problem (Murray, 2002). Unfortunately, much of the data available on nursing attrition and cost is inconsistent due to lack of definition of terms and inconsistent gathering and dissemination of data (Mulholland et al., 2008).

Problem Statement

Nursing student attrition is too high, and the impact of psychosocial factors on academic achievement has not been well described in the literature (Zuzelo, 2005). Poor academic achievement is one of the primary reasons for attrition. As academic failure increases, attrition also increases, thus the two are positively correlated (Peterson, 2009). Nursing student attrition rates are 25 to 40 percent throughout nursing programs in the United States and Great Britain and have become an increasing concern to educators, students, and healthcare providers (Buchan, 2006; Peterson, 2009). While considerable research exists on academic predictors of attrition such as grade point average, science course grades, and nursing entrance exams there has been little research done on psychosocial predictors (Zuzelo, 2005; Wolkowitz & Kelly, 2010). As the demands of multiple roles exceed the student's limited temporal, financial, and energy resources, role overload occurs, potentially leading to unsuccessful performance in the student role

(Alicea-Planas, 2009). Examining psychosocial stressors such as role overload and the associated factors of work hours, study hours, and caregiving hours may reveal an association with student academic achievement and attrition.

Purpose of the Study

The purpose of this predictive correlational study was to examine role overload as a predictor of academic achievement as measured by the semester HESI score and semester points in associate degree nursing students enrolled in a five-semester program. It also examined the relationship between selected demographic variables (age, gender, and ethnicity), hours worked, hours studied, and caregiving hours as potential indicators of role overload.

Research Questions and Hypotheses

RQ1: Does role overload predict academic achievement?

H1: There is a significant negative correlation between a role overload score and academic achievement as measured by semester HESI score and semester points.

RQ2: Is there a significant relationship between work hours (WH), study hours (SH), and caregiving hours (CH) and academic achievement?

H2: There is a significant negative relationship between work hours (WH) and caregiving hours (CH) and academic achievement as measured by semester HESI score and semester points, and a significant positive relationship between study hours (SH), and academic achievement as measured by HESI score and semester points.

RQ3: Is there a significant relationship between work hours (WH), study hours (SH), and caregiving hours (CH) and role overload?

H3: There is a significant positive relationship between work hours (WH), study hours (SH), and caregiving hours (CH) and a role overload score.

RQ4: Is there a significant relationship between selected demographic variables (age, gender, and ethnicity) and role overload?

H4: There is a significant relationship between selected demographic variables (age, gender, ethnicity) and a role overload score.

Theoretical Framework

This researcher will determine if there is a relationship between a student's role overload score and achievement in an associate degree nursing program. These research questions will be guided by Merton's (1957) and Reilly's (1982) role theory, which attempts to explain the interaction between individuals in organizations and the roles they play. Although the term role has existed in a sociological concept for centuries, it became well known in the 1920s as a method of observing and predicting human behavior through the works of George Herbert Mead, Jacob Moreno, and Ralph Linton. Role theory is a perspective in sociology and social psychology that suggests human beings act according to socially defined categories. Each social role is a set of rights, duties, expectations, norms, and behaviors that an individual fulfills. The model is based on the observation that people behave in somewhat predictable ways, and that an individual's behavior is context specific. The term role has had diverse and at times confusing and conflicting usage. It has been used to indicate expectations, descriptions,

evaluations, behaviors, and actions. The term is commonly used in the literature to refer to both expected and actual behaviors associated with a position (Biddle, 1986). Multiple roles are associated with both positive and negative consequences. Role overload and role conflict are two of the most well-known role theory concepts. Role overload refers to the experience of lacking the resources, including time and energy, needed to meet the demands of all roles (Merton, 1957; Reilly, 1982).

The philosophical underpinning of role theory and the closely related component of role overload is pragmatism. Pragmatism is a philosophical movement that arose in the late 19th century claiming that an ideology or proposition is true if it works satisfactorily (Atkin, 2005). The three primary philosophers associated with pragmatism are C.S. Pierce, William James, and John Dewey. Both Pierce and James were members of the Metaphysical Club at Harvard in Cambridge, Massachusetts in the early 1870s. The Metaphysical Club was an informal gathering of men discussing philosophical themes of the times. Pierce introduced the rationalist notion of clear and distinct ideas, which entailed having a grasp of the everyday experience while providing an applicable definition of the concept that led to practical outcomes. He believed this approach allowed thinkers to avoid metaphysical distractions, although later he claimed that any combination of ideas was acceptable as long as the outcome had a possible practical effect. Although Pierce established the foundation of the pragmatist's approach, it was William James who popularized it (Atkin, 2005). In contrast to Pierce's belief that philosophy should not stray from scientific inquiry, James believed that pragmatism is a tool for when scientific explanations fall short. James was a philosopher, psychologist and physician and believed that truth emerges from facts and that truth is verifiable to the

extent that the puzzle pieces fit together. These truths must be observable and applicable to an idea or actual practice, but are dependent on the individual observer and subject to their interpretation and experiences (Mounce, 2001). John Dewey was a philosopher, psychologist, and educational reformer and is considered the father of pragmatism. He referred to pragmatism using the term instrumentalism, which refers to an attempt to establish a logical theory by taking into account how thought functions in the experimental determinations of future consequences. He believed that only the scientific method could reliably improve the human condition and that experimentation could be applied to social, cultural, technological, and philosophical constructs (Miettinen, 2006).

There are three major components of role theory that were further developed in the 1930s that include social structuralism, symbolic interactionism, and dramaturgical perspective. Social structuralism was introduced in the 20th century by Robert Park and Ralph Linton. Park theorized that roles are linked to structural positions, and the self plays multiple roles within the confines of those positions. In the 1930s, Linton proposed a distinction between social structures, specifically between positions, status, and expectations. Social structuralism focuses on society, social systems, and the social structure, which are seen to shape an individual's behavior (Brookes et al., 2004).

Symbolic interactionism was developed by George Herbert Mead in the 1930s and focused on the relationship between mind, self, and understanding human nature in terms of groups and society. He examined processes associated with adapting to change and finding one's social niche. His primary concentration was on social interactions where people cooperate to achieve a goal and the concept that the structure of society

emerges through reciprocal social interaction (Hardy & Conway, 1988). The dramaturgical perspective was developed by the social psychologist Moreno in the 1930s. He was influenced by Mead's theory of role taking and introduced role playing as an experiment to learn to perform a role more adequately (Brookes et al., 2004). Moreno was the first to introduce the idea of using role playing as an experimental procedure for learning to perform a role more adequately. Most significantly, he linked types of role behavior to different sets of expectations (Hardy & Conway, 1988).

Role theory proposes that human behavior is guided by expectations held by both the individual and by other people. The expectations correspond to different roles individuals perform or enact in their daily lives, such as employee, student, and parent. Individuals generally have and manage many roles. Roles consist of a set of rules or norms that function as plans to guide behavior. Roles specify what one should pursue, what tasks must be accomplished, and what actions are required. Role theory states that a large proportion of observable, day-to-day behavior consists of individuals fulfilling their roles. Role theory is considered predictive; in other words, a significant portion of the behavior of a person occupying a specific role can be predicted. Role theory is considered a theory that connects social behavior and social structure (Brookes et al., 2004). However, a role is not something that is natural to a person, but is a group of behaviors that the person somehow comes to fulfill (Brookes et al., 2004).

Role behavior is influenced by role expectations of what is appropriate in a particular position. It can be used to describe the way in which people identify themselves within academic, professional, and personal situations, such as student, employee, parent and/or spouse. Barker (1999) defines it as "a group of concepts, based

on sociocultural and anthropological investigations, which pertain to the way people are influenced in their behaviors by the variety of social positions they hold and the expectations that accompany those positions” (Barker, 1999, p. 17).

Role theory concerns the tendency for human behaviors to form characteristic patterns that may be predicted if one knows the social context in which those behaviors appear. It explains those behavior patterns (or roles) by assuming that people within a context appear as members of recognized social identities or positions, and that they and others hold ideas (expectations) about behaviors in that setting. Its vocabulary and concerns are popular among social scientists and practitioners, and role concepts have generated both theory and research.

Role theory and role overload theory are perspectives in sociology and social psychology that suggest human beings act according to socially defined categories. Each social role is a set of rights, duties, expectations, norms, and behaviors that an individual fulfills. The model is based on the observation that people behave in somewhat predictable ways, and that an individual’s behavior is context specific (Beuchamp et al., 2002; Chang et al., 2005). Role theory is considered predictive; in other words, a significant portion of the behavior of a person occupying a specific role can be predicted (Brookes et al., 2004).

Assumptions of Role Theory and Role Overload

Role theory and role overload assume that individuals occupy a variety of social roles or positions. Each of those roles specifies normative behaviors and attitudes and those behaviors are reinforced by self and others (Chang et al., 2005). Role theory and role overload assume that people are primarily conformists who try to live up to the

norms that accompany their roles and that the norms become internalized and generate behaviors associated with the role. Role theory and role overload support the notion that expectation itself can effectively generate behaviors in individuals. Additionally, consensus and conformity are central to the process (Brookes et al., 2004).

Key Tenets of Role Theory and Role Overload

1. People spend much of their lives participating as members of groups and organizations.
2. Within these groups, people occupy distinct positions.
3. Each of these positions entails a role, which is a set of functions performed by the person for the group.
4. Groups often formalize role expectations as norms or rules, which include what rewards will result when roles are successfully performed and what punishments will result when roles are not successfully performed.
5. Individuals usually carry out their roles and perform in accordance with prevailing norms.
6. Group members check each individual's performance to determine whether it conforms within the norms: the anticipation that others will apply sanctions ensures role performance (Brookes et al., 2004).

Merton (1957) contributed to the research on role theory and role overload by his seminal work on the socialization of medical students at Columbia. Social roles were a primary emphasis of his work and he emphasized that rather than a person assuming one role and one status, they have a status set in the social structure that is attached to a whole set of expected behaviors (Hecht, 2007). Goode (1960) added further to role

theory by his research on role conflict. He believed role conflict describes an incongruity between the expectations of one role and another. Role overload and conflict often lead to difficulties meeting role expectations, known as role strain (Goode, 1960). Both Merton's (1957) and Goode's (1960) work provided foundational studies that provided the theoretical basis for Michael Reilly's (1982) research on role overload as a component of role theory. Reilly defined role overload as conflict occurring when the level of demand exceeds a person's available resources when the person has too many tasks that require attention (Reilly, 1982). The following schematic model was developed by Reilly to illustrate the relationship between role overload and consumer purchasing behaviors. The straight arrows indicate proposed causal relationships, and the curved lines indicate unanalyzed correlations. The final model supports the proposition that the wife's work involvement relates indirectly to the family's consumption through work overload (Reilly, 1982).

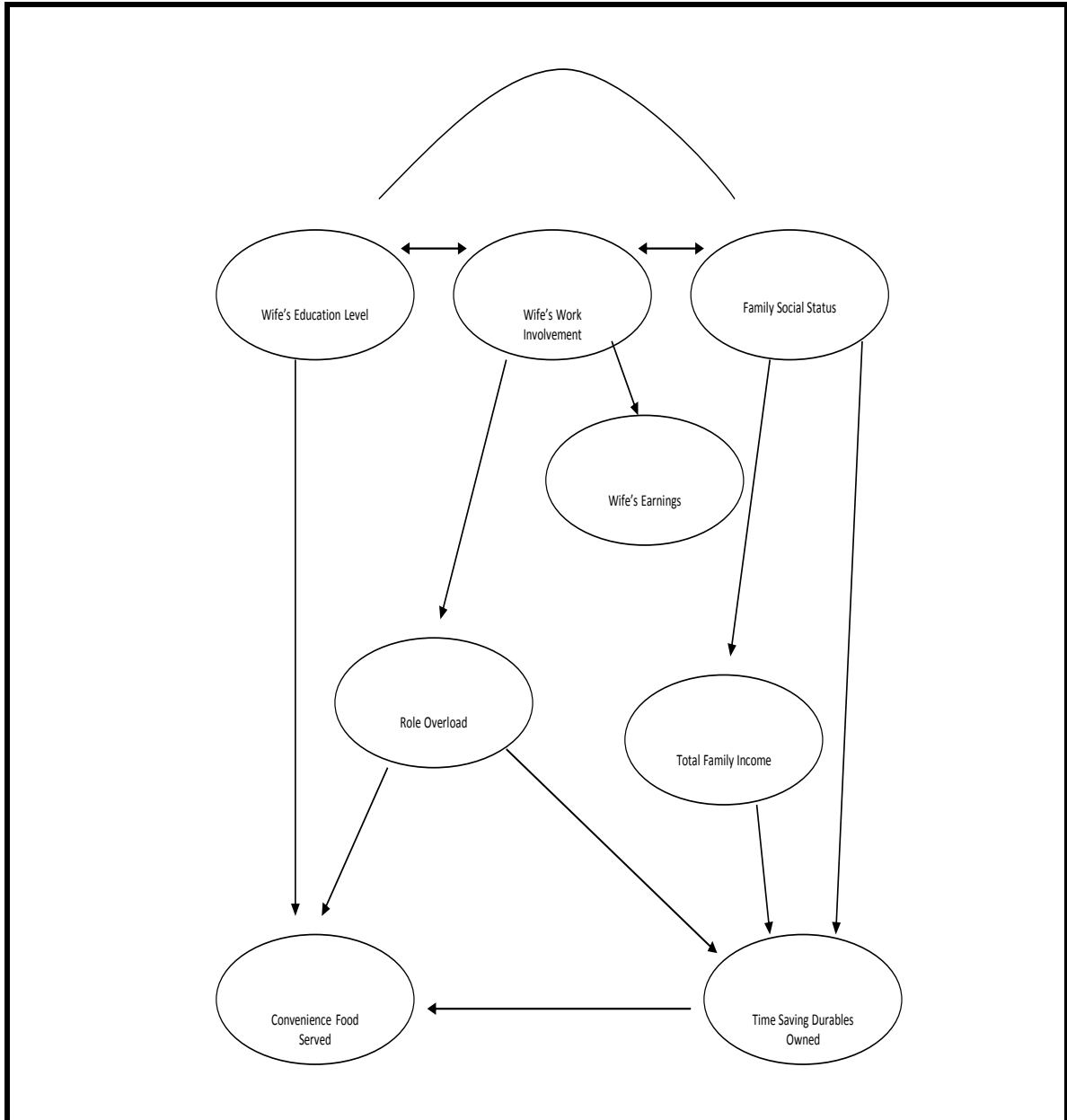


Figure 1. Reilly Role Overload Model (1982)

Reilly's Role Overload Model is a visual representation of the proposed relationships between the research variables. Five exogenous variables are included: the wife's earnings, the wife's role overload, total family income, the number of convenience foods served to the family, and the number of time-saving durables owned by the family. The model positively links the wife's employment to her earnings, and her earnings to

total family income. Total family income is then positively related to ownership of time-saving durables. Family social status was included with positive causal flow toward time-saving durable ownership and family income. Reilly proposed that the wife's work involvement had a positive relationship with role overload and that the increased role overload would correlate positively with convenience food consumption and time saved.

Relationship of Role Theory and Role Overload to Research Study

This researcher will use role theory and role overload theory as developed by the works of Merton (1957) and Reilly (1982) to provide the theoretical framework for exploring the relationship between role overload and achievement. It can serve as a conceptual framework to correlate multiple student roles and academic performance. The relationship of the role theory and role overload to the research study is that it provides a guiding conceptual framework for the development of the research questions and hypotheses. It explains that roles or behavior patterns are generally assumed to be within a recognized social identity or position. Individuals and society at large have certain expectations about behaviors in particular settings. For example, students study, employees work, and parents care for children. Therefore, role overload theory provides a context to describe the behaviors that are associated with certain roles such as student, employee, and caretaker. It further explains that certain expectations are related to societal norms and behavior and provides a vocabulary with which to compare and contrast similar constructs such as role overload, role ambiguity, and role conflict.

Role theory predicts how individuals will perform in a given role, or under what circumstances certain behavior such as role overload can be expected (Hardy & Conway, 1988). It can be used to describe the way in which people identify themselves within

academic, professional, and personal situations such as student, employee, parent and/or spouse and how those roles may be affected by role overload. Role theory has multiple delineations which include role overload, role conflict, role ambiguity, role strain, and role stress. Michael Reilly used role theory for the basis of a marketing research study to explore the effects of roles on consumer purchasing behaviors. He proposed the concept of role overload as a component of role theory to be a possible mediating factor in consumer behavior. Reilly (1982) developed a role overload scale that was initially used in consumer research and has since been applied to education, psychology, law, and healthcare. He defined role overload as a conflict occurring when the level of demand exceeds a person's available resources when the person has too many tasks that require attention (Reilly, 1982). Although Reilly concluded that that the causal relationship between role overload and convenience consumption was not statistically significant, later studies (Belizzi & Hite, 1986; Madill-Marshal, Heslop, & Duxbury, 1995) found high role overload was associated with convenience consumption.

The following schematic model is an adaptation of Reilly's (1982) Role Overload Model that provides a visual representation of the proposed relationships between role overload, demographic characteristics and attrition as measured by the semester points and semester HESI scores.

Role Overload Model

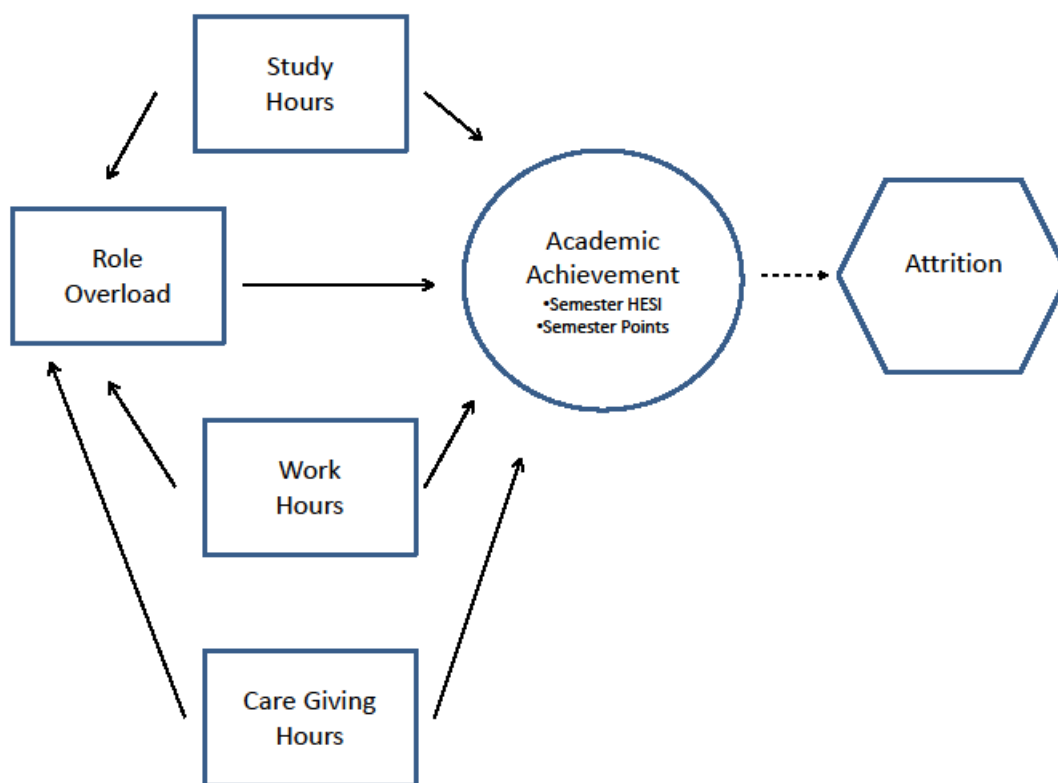


Figure 2. The Role Overload Model as adapted by Wight (2013) from Reilly (1982)

The theoretical model above is a visual representation of the proposed relationship between the variables in the research study, with role overload being the independent variable and its relationship to the dependent variable academic achievement. The dotted line represents the indirect relationship between academic achievement and attrition, which is not being measured in this study. The study will also examine the independent variable of study hours, work hours and caregiving hours and their relationship to both the dependent variables role overload and academic achievement.

Theoretical and Operational Definitions

Role Overload

Theoretical Definition: Conflict occurring when the level of demand exceeds a person's available resources when the person has too many tasks that require attention (Reilly, 1982).

Operational Definition: In this study, role overload was represented by a score derived from Reilly's (1982) role overload scoring model. The role overload instrument is a five-point Likert scale, with one representing disagree and five representing strongly agree. The total scores will range from 13 to 65, with 13 representing minimum role overload and 65 representing maximum role overload.

Achievement

Theoretical Definition: Semester and nursing program success.

Operational Definition: Students passing with a semester point total of 770 out of 1000 points or a "C". The semester HESI scores also served as a definition of achievement.

Semester Points

Theoretical Definition: Student achievement in the course at the end of the semester. This includes the student HESI score.

Operational Definition: In this study, the semester points were derived from the total number of points earned by the student at the end of the semester.

Semester HESI Score

Theoretical Definition: Health Education System, Inc. (HESI) is software-based testing company that produces a standardized test for nursing students.

Operational Definition: In this study, HESI represented the standardized semester level (Nursing I, II, III, IV, V) exam.

Work Hours

Theoretical Definition: A formal contractual agreement between employer and employee for the purpose of earning money.

Operational Definition: Working was operationally defined by item 4 on the researcher designed demographic instrument.

Study Hours

Theoretical Definition: The amount of time spent on course work.

Operational Definition: Hours studied was operationally defined by item 5 on the researcher designed demographic instrument

Caregiving Hours

Theoretical Definition: Time spent caring for family members that are economically and/or physically dependent.

Operational Definition: Hours studied was operationally defined by item 6 on the researcher designed demographic instrument

Significance of the Study

The findings of this study have significance to nursing research, practice, education, and health policy by addressing a gap in the literature on psychosocial indicators of nursing student achievement and consequently attrition.

Nursing Education

This proposed research study is significant to nursing education because it may provide valuable insight into psychosocial factors affecting nursing student attrition. If

a relationship is found between a role overload score and academic achievement, this may allow early identification and intervention for at risk students. Predicting nursing student achievement has the potential to reduce attrition, increase graduation rates, and utilize already limited nursing education resources more efficiently. Lastly, the research may prove invaluable to a singular nursing student who may benefit from the knowledge of the relationship between role overload and attrition.

Nursing Practice

High nursing student attrition rates directly impact the nursing shortage. Decreasing the nursing program attrition rates will increase the amount of nurses available in the healthcare workforce. Due to the identified association between nurse staffing and patient ratios, it also impacts patient care outcomes by improving quality of care. Decreasing attrition among at risk minority groups will also increase the diversity of the nursing professionals, helping it mirror the increasing ethnic diversity of the American population.

Nursing Research

The current literature indicates a lack of research on psychosocial factors related to nursing student attrition. This proposed research project would help expand the data available and may lead to avenues of future research on psychosocial predictors of academic achievement. It also may facilitate exploration of psychosocial factors of nursing student achievement and role theory as it relates to nursing student life roles and responsibilities.

Health/Public Policy

Academic factors alone are insufficient to predict nursing student achievement. Examining psychosocial factors such as role overload may augment the applicant screening process and improve candidate selection. Establishing a relationship between a role overload scale and attrition may provide valuable information to address admission and financial aid policies for future nursing students and improve the allocation of faculty and curricular resources.

Establishing a relationship between a role overload scale and achievement and identifying an instrument that is a predictor of psychosocial risk factors will help educators improve student achievement and decrease attrition, thereby having a direct impact on reducing the current and projected nursing shortage. Alleviating and/or mitigating the nursing shortage will also impact patient care by increasing the available nurses to provide healthcare services. This study will add to the body of nursing knowledge and science of nursing by addressing a gap in the literature relating to psychosocial predictors of attrition.

Scope and Limitations of the Study

This study was administered to a large nursing program in the Southeastern United States that included 400 associate degree nursing students. The program consisted of a culturally diverse population with a mixture of traditional and non-traditional students. A non-randomized convenience sample was utilized. This study was limited by the fact that the research may be biased due to the researcher's employment association with the Associate Degree Nursing (ADN) program. There is a likelihood that

respondents may have responded in a manner they deemed acceptable to the researcher, who was employed by the same organization. The length of the role overload scale is short, but the fact it was completed over a 30-minute time period in class time may have created some time pressure. This study was limited to one Associate Degree program, and therefore, the findings and results of this study may not be generalizable to other nursing programs in other colleges and universities. The study was also limited to only ADN graduates who were currently enrolled in the ADN program in the Fall of 2014.

Threats to Internal Validity

Internal validity is examined to determine the extent to which the effect on the dependent variable is due to something other than the dependent variable (Polit & Beck, 2012). Threats to internal validity included confounding variables such as illness that would have an untoward effect on an individual's typical role responsibilities. There was also potential for instrumentation error, though the Reilly Overload Scale has been used extensively, with demonstrated reliability and validity with various populations. It has not been used in a nursing student population to date. Another threat to internal validity was the lack of standardization of the conditions by which the role overload scale was completed, as it was administered to five different semester levels over a six-week period. Other threats to internal validity included the grades assigned in the course that were not assessed for validity and reliability.

Threats to External Validity

External validity is a determination of the extent to which the research findings can be generalized across populations, settings, and contexts (Polit & Beck, 2012). A threat to external validity may be that the nursing student participants may not proportionately represent the different geographic areas of the United States in educational background, ethnic/cultural differences, and nursing program admission standards. Another threat to external validity was the possibility that some characteristics of the participants such as prior and present experiences, learning, and personality may have interfered with the responses to the questionnaire. The Hawthorne effect may have also been a threat to external validity by skewing participant responses.

Chapter Summary

Nursing student attrition rates are 20 to 50 percent throughout nursing programs in the United States and are a concern for educators, students, and healthcare providers (Buchan, 2006; Peterson, 2009). The nursing shortage affects patient care and the diversity of the nursing profession, and is expected to be a concern in the future due to the aging population. While academic predictors such as GPA, science scores, and entrance scores are well documented in the literature, there is scarce research on psychosocial factors as predictors of attrition.

The purpose of this predictive correlational study was to examine role overload as a predictor of academic achievement as measured by semester points and semester HESI scores in associate degree nursing students enrolled in a five-semester program. It also examined the relationship between the demographic variables (age, gender, and ethnicity), hours worked, hours studied, and caregiving hours as potential indicators of

role overload. Establishing the existence of such a relationship may help identify students at high risk for failure and provide an opportunity for intervention in an effort to decrease attrition. Decreasing nursing program attrition rates would increase the number of qualified nurses, thereby positively impacting the nursing shortage as well. Merton's (1957) and Reilly's (1982) role overload theory was used to guide the research.

CHAPTER TWO

A search of relevant literature across disciplines was conducted to explore the phenomenon of nursing role overload and its relationship to semester grades and nursing student attrition. Using Summon Search and LINCC Web the following computerized databases were used for this search: Academic Search Complete, Barry University, CINAHL, Cochrane, ERIC Google Scholar, Health and Psychosocial Instruments (HAPI), JAMA, MEDLINE (on EBSCO), ProQuest Central. The key words used in the search were **nursing students, nursing student attrition, nursing student failure, cost of nursing student attrition, minority nursing students, nursing shortage, nursing outcomes, and, role theory, and role overload**. Citations were limited by language to English and by subject to exploration of the concepts. Whenever possible, a limitation was imposed to find literature published since 2000, with classics sought by reviewing citations in the published works. A random selection process delimited the profusion of theoretical references that were found. The literature review will be divided into the major theoretical and research literature addressing nursing student role overload, achievement, and attrition and their relationship to semester grades, semester HESI scores, and the nursing shortage.

Review and Critique of the Literature

Role Overload

The purpose of this descriptive correlational study (Dasgupta, 2012) was to investigate how role overload, role conflict, and role ambiguity related to burnout in nurses. The study was conducted in three large private hospitals in Kolkata, India by using convenience sampling. One hundred seventy-five questionnaires were distributed

among staff nurses, with 146 being used, including 44 from critical care units. Role overload, conflict, and ambiguity were found to be significant predictors of disengagement and exhaustion, which are two dimensions of burnout. Job stressors can affect performance job duties and lead to withdrawal, potentially affecting patient care. The study found that efficacy of nurses is negatively correlated with stressors like role overload, role conflict, role ambiguity, and disengagement, exhaustion and burnout. Although no single remedy can eliminate stressors because of the complex causes and physiological differences leading to individual stress, efforts to enhance nurses' efficacy may improve coping abilities and lead to better performance.

A cross-sectional survey design was used by Adebayo (2006) to examine the relationship between non-traditional Nigerian students at the University of Ibadan with respect to workload, social support, and work-school conflict. Data was collected from 126 nontraditional students. The mean, standard deviation, and correlations revealed that participants' marital status ($r=.18, p <.05$) and perceived workload ($r = .60, p < .01$) had significant positive relationship with perceived work-school conflict. This suggests that an increase in respondents' perceived workload is associated with a corresponding increase in perceived work-school conflict. Results revealed that work-school conflict has a significant positive relationship with social support. Results of the hierarchical multiple regression analysis show that perceived workload and supervisor and coworker support are found to be significant predictors of work-school conflict.

In a descriptive-correlational design, Reyes, Hartin, Loftin, Davenport and Carter (2012) conducted a study to examine the relationship between employment and the number of hours worked with overall course GPA and attrition. A convenience sample

of 151 students consisting of 25 men and 126 women was utilized. The group was divided into those who did not work, those working 16 hours or fewer per week, and those working more than 16 hours per week. Descriptive statistics were calculated regarding the number of hours nursing students worked over the course of five semesters. The mean number of hours students worked during all semesters was 15.51 hours per week. The correlation coefficient identified an inverse relationship between the two variables ($r = -0.281$, $P = .000$). Additionally, when identifying the relationship between the hours worked during high-attrition semesters and the high-attrition course GPA, an inverse relationship was observed ($r = -0.393$, $P = 0.000$). In this study, a statistically significant negative relationship was revealed between students who worked at least 16 hours a week and academic performance, especially in high-attrition courses. In general, as the number of hours working increased, a corresponding decrease in students' GPA was identified. In a study conducted by Carolyn Fong (1984) on burnout, a questionnaire was sent to 156 nursing educators at eight campuses of the California State University System, and in-depth interviews were conducted with 30 nursing educators and five chairpersons. Ninety percent (N=141) of the educators completed and returned the questionnaires. The questionnaire contained three subscales of the Work Environment Scale, the Role Overload Scales, the Maslach Burnout Inventor, a Faculty Activities Survey, and a Demographic Data Sheet. The interview schedule consisted of open-ended questions about the workload, degree of support, and experienced stress and burnout. The questionnaire findings indicated that job overload correlated significantly and positively with almost all aspects of burnout. Work pressure and job inadequacy correlated significantly and positively with only the emotional exhaustion aspect of burnout. Other

indices of role overload (hours worked per week, lack of tenure, and lack of doctorate) were not correlated with burnout.

In the hierarchical regression analyses, job overload was the most important predictor of emotional exhaustion. Lack of peer support was the most important predictor of depersonalization toward students. It was concluded that attempts to alleviate burnout must directly address the degree of overload or the lack of support. Any attempt to mitigate the overload-burnout relationship by merely amplifying the amount of support is not likely to be effective.

Michael Reilly (1982) examined the relationship between role overload and consumer convenience consumption. A role overload score in the form of a 13-item, 5-part Likert scale was administered to a convenience sample of 106 married women. The reliability of the scale was estimated using the coefficient alpha, as well as the results of administering some of the items twice in the final instrument. The computed value of Cronbach's alpha was 0.88. The results found that working wives were somewhat more likely to report role overload. Wives who reported role overload were somewhat more likely than others to serve convenience food and to own time-saving durables, although the former relationship did not achieve statistical significance at the 0.05 level. Role overload is a weakly positive, non-significant cause of serving convenience foods. The authors suggested that there may be unidentified confounding variables that were not identified, or that the method of measuring convenience consumption was not particularly sensitive.

The Reilly Role Overload scale has been used frequently to measure role overload (Crouter, Bumpus, Head & McHale, 2001; Bumpus, Crouter, & McHale, 1999; Marks &

MacDermid, 1996; Foxman & Burns, 1987; Belizzi & Hite, 1986). Empirical studies that incorporated the entire 13-item scale have reached contradictory conclusions. The reliability of the scores obtained from Reilly's (1982) 13-item role overload scale has been found to be satisfactory (Thiagarajan, Chakrabarty, & Taylor, 2006). The Reilly Role Overload Scale provides thirteen statements regarding activities and feelings about time commitment. The respondents are asked to use a Likert scale from one to five to describe how much they disagree or agree with each statement. The higher score, the more strongly they agree with the provided statement. Permission was obtained to use the Reilly Role Overload Scale (Appendix I).

The studies examined in this section revealed that working students are a common occurrence and the importance of understanding employment's impact on the student experience. Working students are more likely to experience work overload, which can lead to burnout and disengagement in both the work and school settings. These stressors can affect both academic and work performance. While some articles looked at role overload and burnout in nurses in the workforce, none explored how overload affects nursing students. The relationship between role overload and nursing student attrition has also not been addressed in the literature. This gap in the literature is significant and will be addressed in this research study.

Attrition

On average, attrition rates have been reported to be 50% for students enrolled in baccalaureate nursing programs and 47% for students enrolled in associate degree nursing programs (Newton & Moore, 2009; Peter, 2005). For minority nursing students, these attrition rates can be even higher, ranging between 15% and 85% (Gardner, 2005;

Gilchrist & Rector, 2007; Symes, Travis, & Toombs, 2002). High attrition rates are a concern for society, as healthcare demands are expected to rise due to an increasingly aging and ethnically diverse population and expansion of access to care (American Association of Colleges of Nursing [AACN], 2012; Jurasche, Zhang, Ranganathan, & Lin, 2012). It is essential that nursing programs look carefully at their attrition rates, seek to understand their student population needs, and determine the best strategies to increase student achievement. Harris, Robin, Rosenberg, and O'Rourke (2013) conducted a quantitative study examining students at risk for attrition. In evaluating the three strategies to increase student success, some were shown to be more successful than others. Three risk factors among the nineteen at risk students were identified. Seven of the students had repeated Anatomy and Physiology, eight had been in remedial math, and eight of the students had lower than the national average ACT scores. Enrollment in remedial English was not a risk factor for any of the students. Two of the students had three risk factors present, while all others had only one risk factor identified. A retrospective review of the participants who failed NUR 101 and Chi-square calculations were made using a degree of frequency of 1 and a significance level of 0.05. It was determined that students who repeated A&P or received a C grade were statistically more likely to fail or withdraw from a nursing course. The author recommended that proactive identification of the at risk student, using both academic and psychosocial risk factors, has the potential to decrease attrition through the use of timely remediation and support.

In a qualitative study published by Tara Lynn Rogers (2010), factors that contribute to student success in an associate degree nursing program and the NCLEX-RN were examined. The study was conducted at a state university in rural area with a

retention rate of 80% and a first-time NCLEX-RN pass rate of 89%. A purposive sample of successful graduates who passed the NCLEX-RN and professors who worked closely with successful students were chosen as participants. Six seniors and three faculty members were interviewed and the data was collected in semi-structured, open-ended, and face-to-face interviews. Sessions were audiotaped to preserve accuracy and richness of the data. Document analysis was done to triangulate the interview data. Emergent themes were categorized as student-related, collaborative, and curriculum related. The student-centered themes included motivation, academic abilities, organization, prioritization of roles, and responsibilities, the ability to manage life events and extreme stress, and having healthcare experience. The collaboration themes found that successful students rely on support systems that may include religion, family, finance, and friends. The curriculum themes were teaching methods, program exams, practice questions, and NCLEX-RN courses. Students and faculty both commented on the importance of managing stress, complex circumstances, and multiple roles and responsibilities. This study found factors not commonly found in the research, such as personal wellbeing, rest, and nutrition.

A qualitative study conducted by Marcia Wells in 2003 found that nursing student attrition did not appear to be related to a single stressor. The sample consisted of nursing students who left generic baccalaureate nursing programs in an urban area in the southeastern United States. It included ten females and one male student. Study materials were sent to an administrator at several area nursing schools to be mailed to students who met inclusion criteria. A semi-structured interview guide was used to conduct taped telephone interviews. The interviews were conducted over a four-month period and

lasted between one and two hours. The interview guide consisted of seven open-ended questions that focused on the experiences of the participants while enrolled in the program. Thematic analysis was conducted using the constant comparative method of Glaser and Strauss. The data were analyzed separately by the researcher and a colleague assistant. No substantive differences were found in the identification of categories and themes. Peer debriefing was conducted by a nurse with expertise in qualitative research and member checks were conducted with study participants twice during the study. The final study consisted of eleven participants, as one requested her data not be included in the final results. Of the eleven participants, three reported having caretaking responsibilities for children and/or adult family members while enrolled in the nursing program. Only one participant worked more than an average of 25 hours per week. Eight participants departed after one semester or one year of enrollment, which confirms findings from previous research that most students voluntarily withdraw within the first year of enrollment (Tinto, 1982). She concluded it to be the result of several factors including disillusionment about the profession and school, perceived lack of support from faculty/ and nursing staff, and the external stressors. The study confirmed positive relationships between students and faculty are crucial to student retention and academic achievement

Johnson et al. (2009) conducted a study where 187 and 188 students from two nursing programs from the southeast completed The Personal Background and Preparation Survey (PBPS). The purpose of the study was to assess the predictive validity and reliability of the PBPS between newly matriculated under-represented minority students (URMS) and non-URMS in two diverse nursing schools over a period

of two years. Results showed that the PBPS significantly facilitated early diagnosis of higher adverse academic status events (AASE) in URMS and non-URMS students and identified specific risk factors. Reports not only quantify PBPS risks such as English as a second language, age greater than 30, and at least one child, they also help identify nursing students with higher PBPS total risks. Additionally, it provides recommendations such as early identification and intervention to decrease or eliminate those risks (Johnson et al., 2009).

The studies examined in this section focused on the predictors of student attrition rates up to fifty percent in some nursing programs throughout the United States, and minority groups are at higher risk. Academic factors such as GPA, science scores, and nursing entrance exams have been found to be somewhat predictive of academic failure (Glossop, 2002; Potolsky, Cohen & Saylor, 2003; Peterson, 2009). Students have identified personal background characteristics such as multiple roles and caretaking responsibilities as significant stressors. These studies did not examine whether role overload was a predictor of attrition in nursing students. This study will be whether role overload predicts academic achievement in associate degree nursing students. Therefore, this research project will add to the body of nursing knowledge by exploring role overload and its relationship to attrition.

HESI/Course Grades

Lauchner, Newmann, and Britt (1999) designed the first study in 1996-1997 to determine the accuracy of the HESI in predicting NCLEX-RN success for Licensed Practical Nurse (LPN) and Registered Nurse (RN) candidates. The HESI was identified to be an accurate predictor of success 97.41% of the time among all types of nursing

education programs (Hardin, 2005). Nibert, Young, and Adamson (2002) demonstrated the predictive accuracy of HESI to 98.46%. As a result, an increasing trend is to benchmark levels for progression and graduation that will assure success on the NCLEX-RN. Morrison, Free, and Newman (2002) reviewed five schools of nursing with seven different programs related to NCLEX-RN pass rates before and after implementing remediation policies. Results showed that the NCLEX-RN pass rates improved 9 to 41% after progression and remediation policies were implemented.

A descriptive retrospective research study was used to assess the HESI exit exam's predictive accuracy. A t-test compared 9,695 student scores from 182 schools using designated E2 student scores for progression with student scores from schools without such policies. The E2 was 97.8% accurate in predicting NCLEX success. Students in the progression policy group performed significantly ($p < .0005$) better than students with no policy attached to E2 score. Results support the use of E2 scores in progression policies for support of program outcomes (Lewis, 2008). Because the HESI exam is correlated with NCLEX-RN success, it is used as an indicator of course progression as well in many nursing programs. In this research study, the HESI will be used as a final exam or weighted similarly to an exam score. In all cases it will comprise 15-20% of the final grade, and therefore significantly impact passing the semester. The final grade will be directly correlated with passing the semester.

The studies discussed in this section confirmed that HESI has been found to be an accurate predictor of success in all types of nursing programs throughout the United States. Consequently, it is being used commonly as a benchmark for progression. It is also associated with passing the NCLEX, which makes it useful in confirming program

and licensure success. Semester points are useful in determining course progression because there is a direct correlation between semester point total and course success. This justifies examining both dependent variables to determine if role overload predicts academic achievement in associate degree nursing students.

Nursing Shortage

Historically, hospitals in the United States have experienced cyclical nursing shortages. Three root causes have been repeatedly identified: (1) low enrollment in nursing schools, (2) low salaries and poor working conditions, and (3) the image of nursing (Allen, 2008). There have also been ongoing attempts to deal with the nursing shortage through the creation of unlicensed personnel to provide nursing functions, the importation of foreign born nurses, sign-on bonuses, and government subsidies to nursing education (Allen, 2008). Some of these methods have been strongly criticized for suppressing nurses' salaries, providing short-term fixes for the shortage, and interfering with the free market forces of supply and demand (Elgie, 2007).

The present shortage has been described differently from prior nursing shortages in that the demand for nurses is being driven by a growing elderly population with longer life expectancies (Buerhaus, Staiger, & Auerbach, 2000). It is exacerbated by the number of chronic conditions and increased acuity levels of hospitalized patients. This has created a need for educated nurses with a strong academic and clinical background to address the complex needs of the population they serve (Egenes, 2012). Staiger (2012) described the present condition of a nursing shortage in some regions and an adequate supply in other regions of the country as a "temporary bubble" that is likely to deflate

during the next several years and stated that we should anticipate and plan for the worsening of the nursing shortage within the next decade.

According to the Bureau of Labor and Statistics (2011) there is a projected need for 495,000 replacements in the nursing workforce, bringing the total number of job openings for nurses 1.2 million by 2020. BLS predicts the number of nursing jobs will grow from 2.62 million in 2008 to 3.2 million in 2017, a 22 percent increase. At the same time 458,000 will leave the profession (Robert Wood Johnson Foundation, 2010). By 2020, the RN workforce will be approximately 20% below projected requirements. A grant report by the Robert Wood Johnson Foundation stated the nursing shortage is a result of increasing career options for women, an aging workforce, unsatisfactory working conditions, and a decrease in minorities and younger people attracted to the profession (Allen, 2008). Due to the aging of the Baby Boomer population, the need for healthcare is expected to continue to grow. While the need for nurses increases, nursing schools are struggling to expand capacity to meet the rising demand (Buerhaus, Staiger, & Auerbach, 2000).

The literature reviewed in this section emphasized that the nursing shortage is expected to continue and worsen due to the aging American population, and the increasing acuity level of patients in both the inpatient and outpatient settings. It also addresses previous and current strategies to manage the nursing shortage. Much of the research focuses on recruitment and retention of nurses, but very little focuses on the retention of nursing students as a strategy to address the nursing shortage. There is a gap in the nursing shortage literature that addresses focusing on nursing student attrition and a potential tool to identify psychosocial risk factors such as role overload. There is a need

to decrease nursing student attrition to reduce the nursing shortage. This research study will focus on nursing student attrition and its relationship with the psychosocial risk factor of role overload. Establishing a relationship between a Role Overload Score and attrition will add to the body of nursing knowledge by potentially providing a tool to identify and reduce nursing student attrition.

Chapter Summary

A variety of studies have been conducted exploring the relationship of role overload to stress and performance, and findings suggest that there is a correlation with both phenomenon. Nursing student attrition is well documented in the literature and continues to be a significant concern due to its direct impact on the nursing shortage. HESI semester level exam and exit exams are commonly used throughout nursing programs in the United States due to their high correlation with NCLEX-RN. The literature supports the use of the HESI a measure of semester success that can be correlated with both program success and licensure. The nursing shortage is well documented and expected to continue and increase due to the growth of the elderly population in the United States. Because decreasing nursing student attrition will have a direct impact on the nursing shortage, this is an area that needs to be further explored in nursing research. There is a clear gap in the literature addressing a potential relationship between nursing student role overload, academic achievement, and attrition. Establishing a predictive relationship between a Role Overload Score and academic achievement will add to the body of nursing knowledge by potentially providing a tool to identify and reduce nursing student attrition.

CHAPTER THREE

Methods

The purpose of this predictive cross-sectional correlational study was to examine role overload as a predictor of academic achievement as measured by semester points and semester HESI scores in associate degree nursing students in a five-semester program. It also examined the relationship between selective demographics (age, gender, and ethnicity), hours worked, hours studied, and caregiving hours as potential indicators of role overload. As a result, this information will assist nurse educators to identify students at risk for attrition due to poor academic achievement. Decreasing nursing student attrition will directly impact the current and projected nursing shortage. The Role Theory/Overload Theory of Robert Merton (1957) and Michael Reilly (1982) will be used to guide this study.

A sample of associate degree nursing students in the southeastern United States will be utilized. The following hypotheses will be tested to examine the relationship among the study variables.

Research Questions and Hypotheses

RQ1: Does role overload predict academic achievement?

H1: There is a significant negative correlation between the role overload score and academic achievement as measured by semester HESI score and semester points.

RQ2: Is there a significant relationship between work hours (WH), study hours (SH), and caregiving hours (CH) and academic achievement?

H2: There is a significant negative relationship between work hours (WH) and caregiving hours (CH) and academic achievement as measured by semester HESI score and semester points, as well as a significant positive relationship between study hours (SH) and academic achievement as measured by HESI score and semester points.

RQ3: Is there a significant relationship between work hours (WH), study hours (SH), and caregiving hours (CH) and role overload?

H3: There is a significant positive relationship between work hours (WH), study hours (SH), and caregiving hours (CH) and a role overload score.

RQ4: Is there a significant relationship between selected demographic variables (age, gender, and ethnicity) and role overload?

H4: There is a significant relationship between selected demographic variables (age, gender, ethnicity) and a role overload score.

Study Design

A cross-sectional correlational design was selected for this research study to examine the relationship between the independent variables (role overload score, work hours, study hours, and caregiving hours) and the dependent variables (semester points and semester HESI scores). A correlational design explored the relationship between variables without identifying cause and effect. Correlational design is used to determine relationships among variables or to use these relations to make predictions which best fit the research study (Gay, Mills, & Airasian, 2009). Therefore, this design was selected for its usefulness in examining multiple variables and their correlation to semester points and semester HESI scores. The researcher used the following instruments:

Demographic Survey (Appendix G) and Reilly Role Overload Scale (1982) (Appendix H).

Setting

The setting for this study was a large associate degree program in the southeastern United States. It was established in 1970 and has approximately 400 students enrolled annually. The nursing program is accredited by the Accreditation for Commission Education in Nursing (ACEN). The use of an accredited institution ensures equal access, equity, and quality within the program. The associate degree program was chosen for its representation of a multicultural student population with a significant amount of non-traditional students who are working, married, and caring for children or other dependent family members.

Sample

The target population for this research study is associate degree nursing students. A convenience sample, also referred to as a nonprobability sample (Houser, 2008) was utilized. A separate subsample of students was used for each of the five semester levels (Nursing I, II, III, IV, V). Based on a power analysis using G* Power 3.1, each of the subsamples included a minimum of 43 students; see Figure 3. The power analysis assumes a medium effect size, $\alpha=.05$ and a power of .80. Consequently, a sample size of at least 215 will be required (Figure 3). After Internal Review Board (IRB) approval from Barry University and the IRB at the study site was obtained, data was collected by the survey method and extracted from the college database.

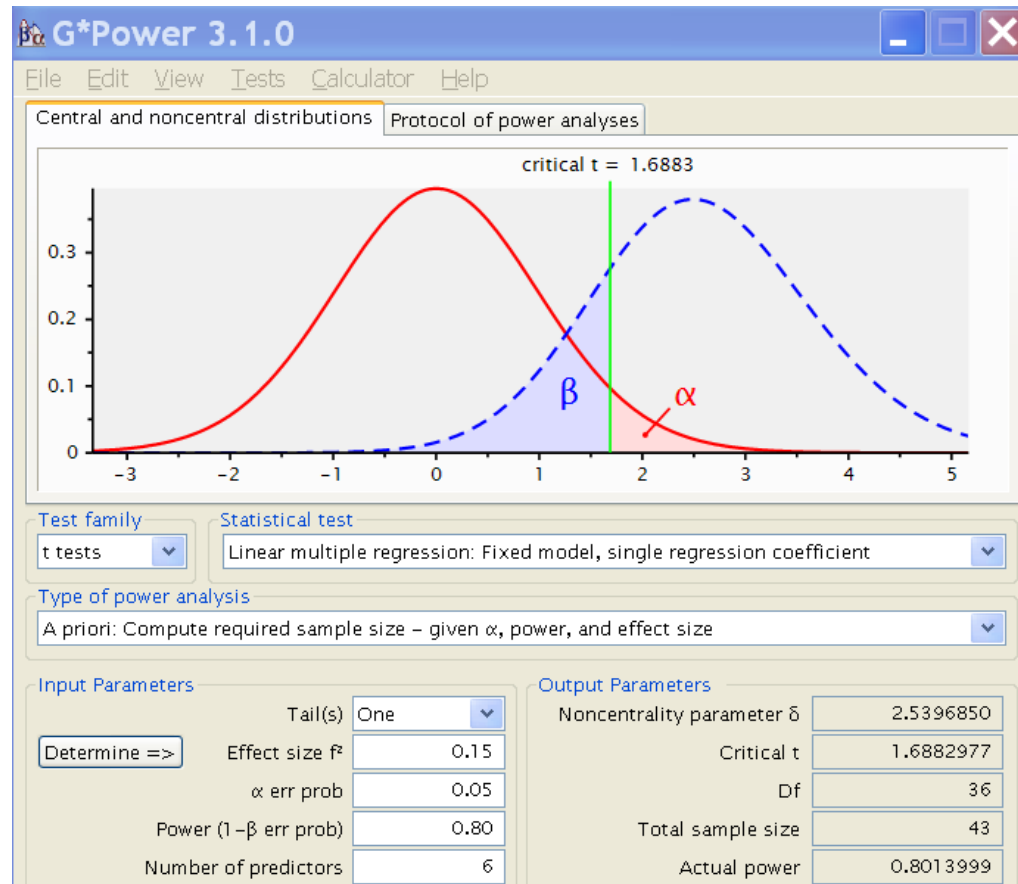


Figure 3.G power 3.1 (Faul, Erdfelder, Lang, & Buchner, 2007)

Inclusion Criteria

1. Students enrolled in the ADN program in the Fall of 2014.
2. Students must be 18 years or older
3. Able to provide informed consent.
4. Students must be English speaking
5. Willing to complete a thirty minute survey.

Exclusion Criteria

1. This study will exclude any student not enrolled in the ADN program during the Fall of 2014.
2. The data analysis will exclude any student who earns a grade of “Incomplete” for the semester.
3. Students who are non-English speaking.

Ethical Considerations

Prior to data collection, the researcher obtained approval from both Barry University and the participating College Institutional Review Boards (IRB) (Appendix A). An access letter was obtained from the dean (Appendix C) and course leaders (Appendix D) from semester levels I-V granting access to the classroom and data collection. A flyer (Appendix F) explaining the purpose of the study was posted at the research site one week before data collection. A cover letter (Appendix E) was provided to participants describing the purpose of the study, benefits, potential risks, data collection procedures, and dissemination of research findings. To ensure protection of research subjects a unique code number was assigned to each survey form. Each volunteer respondent provided their college identification number and their unique code separately from the survey form, rendering each form anonymous. The key linking each unique code with the college identification number was kept separate and the researcher used the key only to correlate the collected data. After correlation the key was destroyed and the data rendered anonymous. Upon completion of the survey, the student placed the survey in a sealed envelope and placed it in a provided receptacle for collection. They

also placed their college identification number and unique code in a separate box provided. At the end of the term, the researcher provided the course leaders with a participant spreadsheet including student college identification numbers for insertion of the students' semester points and semester HESI scores. The hard copies of the survey data collected and the anonymous raw data were stored in a locked file in a locked office and will be kept for five years before destroying. Participants were informed that participation was voluntary and they could discontinue participation at any point without penalty. The contact information for the researcher, advisor, and the contact persons for Barry University and the participating College IRBs was provided to participants should any questions arise.

Recruitment Procedure

A convenience sample was recruited from a large associate degree nursing program in the Southeastern United States in the Fall semester of 2014 with a goal of enrolling a minimum of 215 students. Following IRB approval from Barry University (Appendix A), IRB approval from the ADN institution (Appendix B), and approval from the ADN dean (Appendix C) and course leaders (Appendix D) the researcher scheduled data collection visits to the classroom with the course leaders of a five-semester program. Data was collected over a six week time period, with informational flyers posted at the nursing program site the week prior and throughout the data collection period. The posted flyer (Appendix F) contained information regarding the basics of the study and contact information of the researcher, advisor, and the IRB contacts for both Barry University and the participating ADN institution. Students were fully informed of the nature of the study and assured their participation or non-participation would have no

intentional impact on grades in current or future courses. They were also provided a written copy of the purpose of the study (Appendix E), with access information to the principal investigator, and a copy of the signed consent form permitting access to semester points and semester HESI scores.

Data Collection Procedure

After IRB approval from Barry University and the ADN program, permission to collect data was obtained from both the dean (Appendix C) and course leaders (Appendix D). A flyer (Appendix F) announcing the study was posted in the venue for one week prior to the survey. Two data collection events occurred: student survey (Appendices G & H) during the semester and semester points and HESI score at the end of the term.

The principal investigator presented self in the classroom to survey students in semester levels II-V. A neutral party (an instructor from the advanced track that this group of students will not have as an instructor) administered the survey to semester level I students enrolled in the principal investigator's course. Students were given a cover letter (Appendix E) explaining the survey, confidentiality, and eligibility requirements. Providing student identification numbers constituted voluntary participation and consent to obtain semester points and HESI scores from the course leaders. Students were given up to 30 minutes to complete the Reilly Role Overload Scale (1982) (Appendix H) and the demographic survey (Appendix G). Upon completion of the survey, students placed the completed survey in a sealed envelope, and all surveys were placed in a closed container located in the front of the classroom. The students also put their college identification numbers and unique survey code into a box provided for collection. The participants were informed that survey data will be kept in a locked filing cabinet in the

researcher's locked office for a period of five years and then destroyed. The participants were also informed that the researcher will be storing data in a password protected file on the researcher's computer. The researcher was available to answer any participant questions. They were also given the contact number for the researcher, the research supervisor, and both the Barry University and the participating ADN institution's IRB contact persons via the cover letter (Appendix E).

At the end of the term the course leaders were provided with a Microsoft Excel spreadsheet with the college identification numbers of participating students in their course. The course leaders then exported the semester points and HESI scores from Blackboard into Excel by matching the semester points with the college identification numbers of only the participating students. The completed spreadsheet was then returned to the primary researcher. After the scores were collated with the survey responses using the unique code, the key linking the code and the college identification numbers was deleted, and the data set was rendered anonymous. The researcher did not have access to student identification for any of the participants during data analysis.

The Instruments/Measures

The survey method was used to collect student demographic data such as gender, age and ethnic background and information on student time allocation of study, work, and caregiving. The dependent variables semester points and semester HESI scores were retrieved by the researcher from the course leaders.

Reilly Overload Scale

Michael Reilly's 1982 Role Overload Scale (Appendix H) was used to measure the independent variable of role overload. This five-point Likert scale has been used

extensively to measure role overload. The Likert scale quantified the participant responses as 1 for strongly disagree, 2 for somewhat disagree, 3 for not sure, 4 for somewhat agree, and 5 for strongly agree. Reliability and validity has been established by Thiagarajan, Chakrabarty, and Taylor (2006). Exploratory and confirmatory factor analysis demonstrated that the modified Reilly Overload Scale has internal consistency reliability.

Reliability

Instrument reliability indicates the tool's consistency and accuracy in measuring the target attribute (Polit & Beck, 2012). Exploratory and confirmatory factor analysis demonstrates that the modified Reilly Overload Scale has internal consistency reliability. The mean standard deviation, skewness, and kurtosis of the total scores obtained from the 6-item role overload scale were 4.14, 1.35, -0.15, and -0.35 for the mail survey data, and 4.60, 1.15, -0.24, and -0.36 for the email survey data respectively. The Cronbach's alpha was .89 for the scores obtained from the mail survey, and .87 for those of the e-mail survey (Thiagarajan, Chakrabarty, & Taylor, 2006).

Validity

Validity is the degree to which an instrument measures what it is supposed to measure (Polit & Beck, 2012). Validity was measured by a *t*-test with the statistical significance less than .01, and the effect size was .38. Reilly's scale appears to be a valid measure of role overload in single parents, (Thiagarajan, Chakrabarty, & Taylor, 2006) but has not been utilized in a nursing student population.

The Demographic Survey

A seven-item demographic questionnaire (Appendix G) developed by the researcher was used to describe the participants and to measure the study variables gender, age, and ethnicity. Items 1-3 asked about gender, age, and ethnicity to measure those demographic characteristics as independent variables. Items 4-6 asked about hours worked, hours studied, and hours caring for dependents to obtain contextual data on role overload. Item 7 asked about role identification, which was also to obtain contextual information regarding role overload.

Data Analysis

Data was analyzed using quantitative research methods. A computer software program, IBM SPSS Statistics (2014), was utilized to create the database, and a statistician was consulted to analyze the results. This program was sufficient for both descriptive and multivariate analysis. For directional hypotheses the hypothesis was tested using a one tail t-test. The remaining hypotheses were tested using multiple linear regressions. Hypotheses 1 and 4 were tested using Pearson correlation. Hypotheses 2 and 3 were tested using Multiple Linear Regression.

Data Management and Storage

The hard copies of the survey data collected and the anonymous raw data were stored in a locked file in a locked office and will be kept for five years before destroying. The data was password protected and the participant data was de-identified by removing the college student identification numbers after data correlation.

Chapter Summary

This study sought to identify a relationship between a role overload score and academic achievement as measured by semester points and semester HESI scores. This

chapter described the research design and methodology utilized in exploring the relationships between the variables role overload and semester points and semester HESI scores. Data collection took place at an ADN program in the southeastern United States. Through convenience sampling, participants completed Reilly's (1982) Role Overload Scale and a demographic data questionnaire. Data was analyzed using correlation and regression techniques. Establishing a relationship between a role overload score and achievement as measured by semester points and semester HESI scores in associate degree nursing students will add to the body of nursing knowledge in relation to role overload and its potential relationship to nursing student attrition.

CHAPTER FOUR

FINDINGS OF THE STUDY

The purpose of this predictive correlational study was to examine role overload as a predictor of academic achievement as measured by the semester HESI score and semester points in associate degree nursing students in a five semester program. It also examined selected demographic variables (age, gender, and ethnicity), hours worked, hours studied, and caregiving hours as potential indicators of role overload.

While role overload was not found to predict academic achievement, there was a significant relationship between caregiving over forty hours per week. Students who are full-time caregivers were identified to be at risk for decreased academic achievement. This demonstrates psychosocial factors do have an impact on academic achievement. Gender was found to correlate with role overload, with females experiencing higher role overload than males. Though a relationship existed between work hours, study hours, and role overload, these did not correlate with academic achievement. The study confirmed the reliability of the Reilly Role Overload Scale (1982).

The factors that did not correlate with academic success were interesting as well. Despite anecdotal accounts that a specific number of hours of study are required for each credit hour taken, the hours spent studying did not have correlation with academic achievement. Similarly, hours spent working was not shown to have a correlation relationship with academic achievement.

Nursing student attrition rates continue to range from 25 to 40 percent across the nation, and student attrition directly impacts the nursing shortage (Buchan, 2006; Peterson, 2009). The nursing shortage is expected to continue and potentially worsen due

to the aging of practicing nurses and the patient population (Buerhaus, 2008). The impending and continued projected nursing shortage provides a strong rationale for increasing nursing student retention and identifying factors that affect attrition. While considerable research exists on academic predictors of attrition such as grade point average, science course grades, and nursing entrance exams there has been little research done on psychosocial predictors (Zuzelo, 2005; Wolkowitz & Kelly, 2010). As the demands of multiple roles exceed the student's limited temporal, financial, and energy resources, role overload occurs, potentially leading to less successful performance in the student role (Alicea-Planas, 2009). Examining psychosocial stressors such as role overload and the associated factors of work hours, study hours, and caregiving hours may reveal an association with student academic achievement.

Many researchers have concluded that educators must address the non-cognitive predictors for student attrition in addition to the traditional cognitive/academic predictors (Braxton, Brier, & Hossler, 1988; Cariaga-Lo et al., 1997; Clewell et al., 2006; Schmidt et al., 2009). Glossop (2002) identified personal difficulties, family concerns, and financial challenges as primary contributors to nursing student attrition. Additionally, Johnson et al. (2009) highlighted the importance of developing a valid tool to identify students at risk for attrition early in the nursing program by assessing both cognitive and non-cognitive risk factors. The key roles played by early identification of academic and psychosocial factors emphasize the need for instruments that can identify and address risk factors early in the nursing programs. There is evidence in the literature that supports increasing student awareness of the effects of psychosocial factors may also improve student retention (Williams, 2010).

Description of the Sample

Of the 408 students presented with the survey, 326 valid responses (82%) made up the sample population ($n=326$). The sample population was approximately 20% men and 80% women (see Table 1), ranging in age from 20 to 55 with the respondents' average age of 30. See Table 2. This closely mirrors the National League for Nursing's Annual Survey (2013) that reports 16% of associate degree nursing students are now men, with the remaining 84% comprised of women. The 129 respondents who reported having children typically had two children. Fifty percent of associate degree nursing students are over thirty years of age, similar to the sample population. The respondents' ethnicity was reported as: Whites ($n=156$, 48%), Hispanics ($n = 66$, 20.2%), Blacks ($n = 62$, 19%), Asians ($n = 27$, 8.3%), American Indian ($n=1$, .3%), Other($n= 9$, 2.8%), and Ethnicity unspecified ($n=5$, 1.5%). The sample showed greater diversity than students in associate degree nursing programs nationwide, Hispanics (6%), Blacks (9%), and Asians (4%) (National League for Nursing, 2013). However, the diversity of this study more closely resembled the NLN registered nurse labor force statistics Hispanics (15.4%), Blacks (12%), and Asians (5%), (National League for Nursing, 2013). Consequently, the ethnic diversity of the sample was unlikely to affect the generalizability of the findings.

The Reilly Role Overload Scale consisted of 13 survey questions with responses given on a Likert scale from a low of 1, indicating no overload, to a high of 5, indicating the highest overload. The lowest possible score is 13 and the highest is 65. The Role Overload Scores averaged just above 50 (see Table 2), indicating the average response to each question was 4, or moderately high overload.

Academic achievement was indicated by student semester points and HESI score. At the end of the term the course leaders provided student semester points averaging more than 800 and HESI scores averaging above 850. Semester points were based on a scoring range of 0 to 1000 points, with 770 being a minimum passing score with a grade of C. A HESI score of 850 or higher has been found to be predictive of passing the NCLEX-RN licensure exam (Nibert et al., 2002).

Table 1 Frequency Distribution of Student Demographic Data

Measure	Frequency	Percentage
Gender		
Women	259	79.4%
Men	59	18.1%
Gender Unspecified	8	2.5%
Total	326	100.0%
Ethnicity		
White (Not Hispanic or Latino)	156	47.9%
Hispanic	66	20.2%
Asian	27	8.3%
Black (Not Hispanic or Latino)	20	6.1%
Caribbean	42	12.9%
American Indian	1	.3%
Other	9	2.8%
Ethnicity unspecified	5	1.5%
Total	326	100%

Table 2. Descriptive Statistics for Role Overload, # of Children, Age, Semester Points, and HESI Score

Measure	<i>n</i>	Mean	Standard Deviation	Range
Overload Score	326	51.41	10.23	13 to 65
Number of Children*	129	1.94	.899	1 to 4
Age	319	29.65	7.507	20 to 55
Semester Points	319	823.78	52.293	707 to 948
HESI	317	867.59	121.289	516 to 1186

* Among those who reported children

All respondents taking the survey were students enrolled in the Associate Degree Nursing Program; however, 16 did not identify with student role. It is unknown if this was oversight or the respondents did not actually identify with the student role. To preserve the integrity of the dataset the responses were taken at face value, though surveys that were turned in blank were not included in the dataset. Although some students identified with each of the roles provided, nearly half of the respondents identified with the roles of employee, parent, and spouse. Only 8% of the respondents identified with the caretaker role.

Table 3. Roles the Respondents Identified With

Role	Yes	No
Student*	310	16
Employee	186	140
Spouse	165	161
Parent	129	197
Caretaker	23	303

Table 4 indicates that over half of the respondents identified with three or more roles. The highest percentage of respondents identified with three roles. This is consistent with the high average role overload score of the sample.

Table 4. Number of Roles Respondents Identified With

# of Roles	Count
0	7
1	63
2	81
3	114
4	59
5	2

Exploratory Data Analysis

Reliability

Reilly's Role Overload scale was determined to be reliable for this sample as measured by Cronbach's Alpha, $\alpha = .92$. HESI determines reliability of the exams by conducting an item analysis on each exam that is returned to the company for a composite report of the aggregate. The estimated reliability coefficients ranged from 0.86 to 0.99 (Morrison, Free & Newman, 2008). Reliability scores for the participants using the HESI are assumed. The institution where the study was done does complete Chronbach's Alpha reliability measures on each exam, but the reliability of semester points is an unknown factor.

Evaluation of Required Assumptions for Regression and Correlation

The respondents were asked to provide the number of hours they spent each week in each of the following activities: studying, working (employment), and caregiving for dependents. In the dataset, four individual responses were identified as implausible because the amount of time indicated exceeded twice what is considered full time employment. One respondent had reported 112 hours of work as well as 112 hours of caregiving. Another respondent reported 100 hours of study. A third respondent reported 80 hours of study. These four responses were not included in the statistical analysis.

P-P plots were examined for all of the continuous variables to evaluate the extent to which they were normally distributed. Overload, age, work hours, study hours, HESI scores, and semester points were all satisfactorily normal. However, the number of hours spent caring for dependents is skewed (see Figure 4) because of the number of respondents (45%) who spent zero hours caring for dependents.

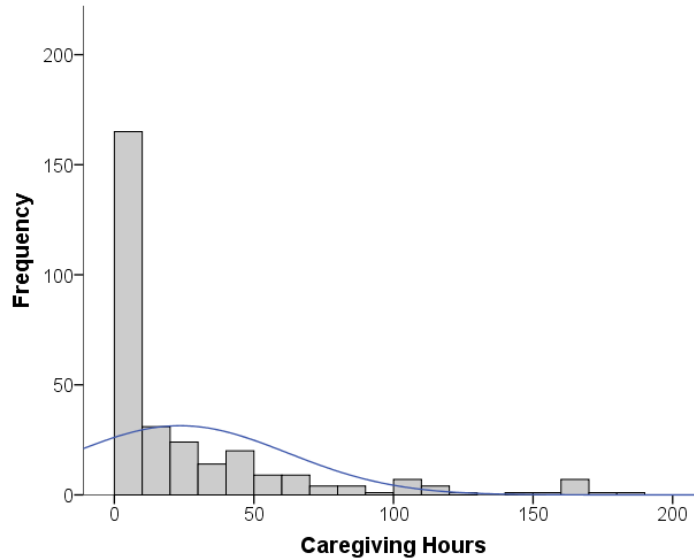


Figure 4. Distribution of Caregiving Hours

Transformations were not effective in improving the normality of the distribution of caregiving hours. Consequently, the variable was recoded as a categorical variable.

Caregiving hours was recoded into 3 categories: none, 1 to 40, and over 40.

Scatterplots were examined to evaluate the extent to which the relationships between the achievement measures (HESI and semester points) and the continuous predictors (role overload, work hours, and study hours) were linear. Also the linearity of the relationship between role overload and work or study hours was examined. The linearity of all the relationships was found to be satisfactory.

Hypotheses Testing

Hypothesis 1

RQ1: Does role overload predict academic achievement?

H1: There is a significant negative correlation between the role overload score and academic achievement as measured by semester HESI score and semester points.

A correlational analysis was conducted to evaluate the strength of the negative relationship between role overload and achievement. Two measures of achievement were semester points and HESI scores. Pearson correlation coefficients were computed among the three variables. The results of the one-tail correlation tests are presented in Table 5. Neither the correlation between role overload and semester points nor the correlation between role overload and HESI scores was statistically significant. The hypothesis predicting a relationship between role overload and academic achievement was rejected.

Table 5. Correlation between Role Overload and Academic Achievement

Measure	1	2	3
1 Role overload	—		
2 Semester points	-.090	—	
3 HESI score	.135		—

Note. $n = 318$. Correlations are one-tail. $p > .05$

Hypothesis 2

RQ2: Is there a significant relationship between work hours, study hours, and caregiving hours and academic achievement?

H2: There is a significant negative relationship between work hours and caregiving hours and academic achievement as measured by semester HESI score and semester points, as well as a significant positive relationship between study hours and academic achievement as measured by HESI score and semester points.

A multiple linear regression analysis was conducted to evaluate how well work hours, study hours, and caregiving hours predicted achievement. The predictors were work hours, study hours, a dummy variable for caregiving hours between one and 40, and a dummy variable for caregiving hours greater than 40. The criterion variable was semester points. The linear combination of predictors was not significantly related to semester points, $F(4,285) = 1.122$, $p = .35$. The sample multiple correlation coefficient was .13, indicating that less than 2% of the variance of semester points in the sample can be accounted for by the linear combination of predictors; see Table 6. The hypothesis predicting a negative relationship between work hours, study hours and caregiving hours and semester points was rejected. However, it was noteworthy that caregiving hours had a small statistically significant effect on semester points.

Table 6. Regression Analysis Summary for Work Hours, Study Hours, and Caregiving Hours as Predictors of Semester Points

Variable	Unstandardized Coefficient	Standard Error	Standardized Coefficient	Partial Correlation
(Constant)	831.294	7.789		
Work hours	-.122	.212	-.034	-.03
Study hours	.038	.220	.010	.01
Caregiving 1 to 40	-8.332*	6.019	-.087	-.08
Caregiving More than 40	-14.953*	7.993	-.117	-.11

Note. $R^2 = 0.02$ ($N = 290$, $p = .35$)

* $p < .05$. one-tail

A multiple linear regression analysis was conducted to evaluate how well work hours, study hours, and caregiving hours predicted achievement. The predictors were work hours, study hours, a dummy variable for caregiving hours between one and 40, and a dummy variable for caregiving hours greater than 40. The criterion variable was the HESI score. The linear combination of predictors was not significantly related to the HESI score, $F(4, 289) = 1.367$, $p = .25$. The sample multiple correlation coefficient was .14, indicating that less than 2% of the variance of HESI scores in the sample can be accounted for by the linear combination of predictors; see Table 7. The hypothesis was not accepted. However, it was noteworthy that caregiving hours greater than 40 had a small statistically significant effect on the HESI scores.

Table 7. Regression Analysis Summary for Work Hours, Study Hours, and Caregiving Hours as Predictors of HESI Scores

Variable	Unstandardized Coefficient	Standard Error	Standardized Coefficient	Partial Correlation
(Constant)	903.859	20.314		
Work hours	-.262	.553	-.028	-.03
Study hours	-.784	.574	-.082	-.08
Caregiving 1 to 40	-19.075	15.648	-.077	-.07
Caregiving More than 40	-35.343*	20.951	-.106	-.10

Note. $R^2 = 0.02$ ($N = 289$, $p = .25$)

* $p < .05$. one-tail

Hypothesis 3

RQ3: Is there a significant relationship between work hours, study hours, and caregiving hours and role overload?

H3: There is a significant positive relationship between work hours, study hours, and caregiving hours and role overload score.

A multiple linear regression analysis was conducted to evaluate how well work hours, study hours, and caregiving hours predicted the role overload scores. The predictors were work hours, study hours, a dummy variable for caregiving hours between one and 40, and a dummy variable for caregiving hours greater than 40. The criterion variable was the role overload score. The linear combination of predictors was significantly related to role overload, $F(4, 291) = 3.894$, $p = .004$. The sample multiple correlation coefficient was .23, indicating that approximately 5% of the variance of role overload scores in the sample can be accounted for by the linear combination of

predictors; see Table 8. The linear combination of predictors had a moderately strong relationship with role overload. The hypothesis of a relationship between work hours, study hours and caregiving hours and role overload scores was accepted.

Table 8. Regression Analysis Summary for Work Hours, Study Hours, and Caregiving Hours as Predictors of Role Overload Scores

Variable	Unstandardized Coefficient	Standard Error	Standardized Coefficient	Partial Correlation
(Constant)	48.624	1.654		
Work hours	.008	.045	.011	.01
Study hours	.019	.047	.024	.02
Caregiving 1 to 40	2.552*	1.293	.121	.12
Caregiving more than 40	6.479***	1.682	.235	.22

Note. $R^2 = 0.05$ ($N = 296$, $p = .004$)

* $p < .05$, *** $p < .001$. one-tail

Hypothesis 4

RQ4: Is there a significant relationship between selected demographic variables (age, gender, and ethnicity) and role overload?

H4: There is a significant relationship between selected demographic variables (age, gender, and ethnicity) and a role overload score.

A multiple linear regression analysis was conducted to evaluate how well age, gender, and ethnicity predicted role overload score. The predictors were age, gender, and ethnicity. The criterion variable was the role overload score. The linear combination of predictors was significantly related to role overload scores, $F(5,309) = 2.832$, $p = .02$.

The sample multiple correlation coefficient was .21, indicating that approximately 4% of the variance of role overload scores in the sample can be accounted for by the linear combination of predictors; see Table 9. The hypothesis was accepted because the linear combination of demographic predictors was significantly related to role overload scores with a moderate effect size, even though none of the predictors were individually statistically significant. A T-test was done examining the demographic variables of ethnicity, age, and gender. While ethnicity and age were not correlated with role overload, gender was found to be the demographic variable most strongly associated with role overload.

Table 9. Regression Analysis Summary for Gender, Age and Ethnicity as Predictors of Role Overload Scores

Variable	Unstandardized Coefficient	Standard Error	Standardized Coefficient	Partial Correlation
(Constant)	48.968	4.035		
Women	2.698	1.444	.105	.11
Age	-.007	.075	-.005	-.01
White or Asian	-.785	3.226	-.039	-.01
Black or Hispanic	3.176	3.313	.141	.05
Caribbean	.034	3.513	.001	.001

Note. $R^2 = 0.04$ ($N = 315$, $p = .016$) $p < .05$, one-tail

Supplementary Analysis

An independent samples t-test was conducted to evaluate the relationship between caregiving more than 40 hours and role overload score. The independent variable caregiving more than 40 was a dummy variable coded one if the respondent

reported more than 40 hours of caregiving and otherwise coded zero. The dependent variable was the role overload score. The means and standard deviations for role overload scores are presented in Table 10. A preliminary analysis evaluating the assumption of homogeneity of variances, using Levene's test, indicated no significant differences in variances between groups, $F(1,300) = .102, p = .75$. The t-test was significant, $t(300) = 2.836, p = 0.003$. Caregiving more than 40 hours was significantly associated with higher mean role overload scores.

Table 10. Role Overload Score Means and Standard Deviations by Caregiving Hours

Caregiving Hours	<i>n</i>	Mean	Standard Deviation
≤ 40 hours	252	50.42	10.24
> 40 hours	50	54.94	10.47

An independent samples t-test was conducted to evaluate the relationship between caregiving more than 40 hours and HESI scores. The independent variable caregiving more than 40 was a dummy variable coded one if the respondent reported more than 40 hours of caregiving and otherwise coded zero. The dependent variable was the HESI score. The means and standard deviations for HESI scores are presented in Table 11. A preliminary analysis evaluating the assumption of homogeneity of variances, using Levene's test, indicated no significant differences in variances between groups, $F(1,293) = .227, p = .63$. The t-test was significant, $t(293) = 1.683, p = 0.05$. Caregiving more than 40 hours was significantly associated with lower mean HESI scores.

Table 11. HESI Score Means and Standard Deviations by Caregiving Hours

Caregiving Hours	<i>n</i>	Mean	Standard Deviation
≤ 40 hours	248	870.86	123.163
> 40 hours	47	838.00	120.567

An independent samples t-test was conducted to evaluate the relationship between caregiving more than 40 hours and semester points. The independent variable caregiving more than 40 was a dummy variable coded one if the respondent reported more than 40 hours of caregiving and otherwise coded zero. The dependent variable was the number of semester points. The means and standard deviations for semester points are presented in Table 12. A preliminary analysis evaluating the assumption of homogeneity of variances, using Levene's test, indicated no significant differences in variances between groups, $F(1,294) = .248, p = .62$. The t-test was significant, $t(294) = 1.761, p = 0.04$. Caregiving more than 40 hours was significantly associated with lower mean semester points. See Table 12.

Table 12. Semester Point Means and Standard Deviations by Caregiving Hours

Caregiving Hours	<i>n</i>	Mean	Standard Deviation
≤ 40 hours	248	826.54	45.926
> 40 hours	48	813.60	49.950

Summary of Results

This research included a survey of 326 Associate Degree Nursing students at a nursing program in the southeastern United States. Data used to measure the variables of role overload scores and HESI scores were reliable and appropriate for the target population.

Role overload score was not found to be a significant predictor of academic achievement. Likewise, the combination of study hours, work hours, and caregiving hours was not a significant predictor of academic achievement, although caregiving hours (especially caregiving more than 40 hours) was significantly related to role overload scores and decreased academic achievement. Students who are full-time caregivers were identified to be at risk for decreased academic success, demonstrating psychosocial factors do have an impact on academic success. Several research studies have found that family responsibilities impact student success (Ross-Gordon, 2007; Cuthbertson et al., 2004, Potolsky et al., 2003; Chapman & Orb, 2001; Home, 1998), and this study supports the finding that family responsibilities such as caregiving do affect academic achievement. Though a relationship existed between work hours, study hours, and role overload, these did not correlate with academic achievement. The study confirmed the reliability of the Reilly Role Overload instrument (1982) but did not support its use for predicting academic achievement. The need for additional tools to measure and predict psychosocial factors affecting academic achievement continues to exist and warrants further research. Johnson et al. (2009) emphasized the need for developing a valid tool that addresses both cognitive and non-cognitive tools to identify students at risk for attrition, and this study supports that imperative.

The aggregate of selected demographic characteristics, while not correlated with academic success, was a significant predictor of role overload score. Gender was found to correlate with role overload, with females experiencing higher role overload than males.

CHAPTER FIVE

SUMMARY AND DISCUSSION

The purpose of this predictive correlational study was to examine role overload as a predictor of academic achievement as measured by the semester HESI score and semester points in associate degree nursing students enrolled in a five-semester program. It also examined the relationship between selected demographic variables (age, gender, and ethnicity), work hours, study hours, and caregiving hours as predictors of role overload. The research questions were guided by Merton's (1957) and Reilly's (1982) role theory. This chapter summarizes the study and discusses the findings from several perspectives. It also identifies the significance and implications of the findings to nursing education, nursing practice, nursing research, and health/public policy. The strengths and limitations of the study as well as recommendations for future study are discussed.

The aging of professional nurses continues to decrease the available healthcare workforce, while the aging of the population continues to increase the demand for nurses. Nursing education is unable to produce enough new graduates to keep pace with demand, contributing to the ongoing shortage (Buerhaus, 2008). The current and projected nursing shortage provides a strong rationale for increasing nursing student retention and identifying factors that affect attrition. While considerable research exists on academic predictors of achievement such as grade point average, science course grades, and nursing entrance exams, there has been little research done on psychosocial predictors (Zuzelo, 2005; Wolkowitz & Kelly, 2010). The psychosocial phenomenon of role overload was addressed in this study and filled a gap in the literature. While role overload scores were not found to be predictive of academic achievement, there was a

correlation between caregiving over 40 hours per week, role overload, and academic achievement.

Several researchers have concluded that educators must address the non-cognitive predictors for student achievement in addition to the traditional cognitive/academic predictors (Braxton, Brier, & Hossler, 1988; Cariaga-Lo et al., 1997; Clewell et al., 2006; Schmidt et al., 2009). Glossop (2002) identified personal difficulties, family concerns, and financial challenges as primary contributors to nursing student achievement. The association between excess caregiving hours and academic achievement supports Glossop's research findings. Additionally, Johnson et al. (2009) highlighted the importance of developing a valid tool to identify students at risk for attrition early in the nursing program by assessing both cognitive and non-cognitive risk factors. Although Reilly's Role Overload Scale demonstrated reliability, it was not found to be predictive of academic achievement in this nursing student population. This suggests the tool will not be useful for identifying students at risk for attrition, and other tools need to be identified and/or developed. The importance of academic and psychosocial factors emphasizes the need for instruments that can identify and address these risk factors early in the nursing programs. The literature also supports increasing students' awareness of the effects of psychosocial factors on academic achievement may also improve student retention (Williams, 2010). The literature indicates that notifying students of the correlation between excessive caregiving hours and decreased academic achievement is worthwhile.

Summary of the Study

The following hypotheses were tested:

H1: There is a significant negative correlation between role overload score and academic achievement as measured by semester HESI score and semester points.

H2: There is a significant negative relationship between work hours and caregiving hours and academic achievement as measured by semester HESI score and semester points, as well as a significant positive relationship between study hours and academic achievement as measured by HESI score and semester points.

H3: There is a significant positive relationship between work hours, study hours, and caregiving hours and role overload score.

H4: There is a significant relationship between selected demographic variables (age, gender, and ethnicity) and role overload scores.

Statistical analysis revealed that Hypotheses 1 was not accepted. Hypothesis 2 was not accepted, but it is noteworthy that in a one-tail test, caregiving hours, especially caregiving hours greater than 40, had a small statistically significant impact on achievement. Hypothesis 3 was accepted, with caregiving hours making a greater contribution to role overload than either work hours or study hours. Hypothesis 4 was accepted because the demographic predictors are significant collectively, even though none of them is significant individually.

The convenience sample (n=326) consisted of approximately 20% men and 80% women, ranging in age from 20 to 55, with respondents typically in their late twenties or

early thirties. This closely mirrors the National League for Nursing's Annual Survey (2013) that reports 16% of Associate degree nursing students are now men, with the remaining 84% comprised of women. Fifty percent of associate degree nursing students are over thirty years of age, similar to the sample population. Demographically the sample in this study showed greater diversity compared to the National League for Nursing's Annual Survey (2013) statistics for students in associate degree nursing programs nationwide. However, the diversity of this study more closely resembled the NLN registered nurse labor force. The diversity of the sample may be beneficial to the study given that attrition rates are higher among minority students (Gardner, 2005; Gilchrist & Rector, 2007; Symes et al., 2002).

Discussion of Findings

Hypothesis 1

Hypothesis 1 considered the correlational relationship between role overload scores and academic achievement. The research hypothesis was not accepted. Correlational analysis found that role overload scores were not significantly correlated with academic achievement as measured by HESI scores, $r = .135$, $p = (\text{one tailed}) > .05$, and semester points, $r = -.090$, $p = (\text{one tailed}) > .05$. The statistics indicate that role overload does not correlate with academic achievement. Therefore, more role overload in general does not impact academic achievement. The possible explanations are: students with more overload may be prioritizing their studies and spending more time, energy, and attention on the student role than competing roles; the quality of effort spent in the role is more important than the quantity; and/or students who have higher role overload are better able to compensate and perform academically.

Hypothesis 2

Hypothesis 2 sought to determine if there was a significant relationship between work hours, study hours, and caregiving hours, and academic achievement. The research hypothesis was not accepted. Multiple linear regression found that 2% of the variance of semester points in the sample can be found by the linear combination of predictors and was not significantly related to semester points, $F(4,146) = 1.216, p = .30$. Multiple linear regression found that approximately 2% of the variance of HESI scores in the sample can be accounted for by the linear combination of predictors, $F(4,285) = 1.216, p = .30$. The research hypothesis was not accepted. This confirms research by Jeffreys (2012), which found that all study hours are not equal. Adequate study hours are based on the individual and are difficult to quantify based on student self-appraisal, accuracy, and other unidentified variables. The lack of correlation does not support or disprove the literature reporting a positive relationship between working and academic performance (Ackerman & Gross, 2003; Strauss & Volkwein, 2002). However, it is noteworthy that when caregiving hours becomes more than a full time job (>40 hours) it contributes to role overload and has a damaging effect on academic achievement. Students who were caregiving over 40 hours had mean HESI scores that were 30 points lower than students with no caregiving responsibilities. Additionally, students who were caregiving over 40 hours had semester points that were 10 points lower than students with no caregiving responsibilities. This is supported by the research done by Glossop (2002), who identified personal difficulties, family concerns, and financial challenges as primary contributors to nursing student attrition. The number of hours spent in various roles will

not necessarily impact achievement, except that those with caregiving hours that equal or exceed those of a full time job have lower academic achievement.

The complexity of the inter-related factors of work, study hours, and caregiving can be difficult to unravel due to the subjective nature of an individual's experience with the phenomenon of Role Overload.

Hypothesis 3

Hypothesis 3 sought to determine if there was a significant relationship between work hours, study hours, caregiving hours, and role overload. The research hypothesis was accepted. The linear combination of predictors was significantly related to semester points, $F(4,291) = 3,894, p = .004$. The sample multiple correlation coefficient was .23, indicating that approximately 5% of the variance of role overload scores in the sample can be accounted for by the linear combination of predictors. The more hours spent in various roles, the higher the role overload score. Significantly, students with caregiving hours that equaled or exceeded a full time job had role overload scores 3 to 6 points higher than students who did not. This finding supports the research done by Adebayo (2006) that found a correlation between students' perceived workload and work-school conflict. It is also supported by Potolsky et al. (2003), who found age, marital status, and number of children to be a contributing factor to attrition. This finding is also consistent with hypotheses 2 that found students with caregiving hours of 40 hours or more had lower academic achievement. This suggests that there is a difference in the role that the student is assuming and that all hours spent in various roles are not equal. Caregiving greater than 40 hours appears to exact an especially heavy toll on student performance, and it may be beneficial to identify the students who have caretaking responsibilities that

equal or exceed a full time job as being at risk for decreased academic achievement.

Early identification and support services such as mentoring, remediation, and additional financial support for this at risk group may prove beneficial in reducing attrition rates in this vulnerable student group.

Hypothesis 4

Hypothesis 4 considered the correlational relationship between selected demographic variables and role overload scores. The predictors were age, gender, and ethnicity. The research hypothesis was accepted. The linear combination of predictors was significantly related to role overload scores. The sample multiple coefficient was .21, indicating that approximately 4% of the variance of role overload scores can be accounted for by the linear combination of predictors. Cumulatively, demographics predict role overload and a T-test showed gender had the strongest effect. Women have higher role overload scores, which may be related to their disproportionate amount of caregiving responsibilities. This finding is consistent with Reilly's (1982) study that found working wives were more likely to report role overload. It is also consistent with the work of Cuthbertson et al. (2004), who found childcare issues to be associated with higher attrition rates in non-traditional nursing students. The role of caregiving is more typically associated with the female gender, and this is a conceivable explanation for why women reported higher role overload scores.

A central mission of the community college system is to serve the community in which it is situated, and it provides convenient and affordable access to education for individuals for whom it may have otherwise been unobtainable. The National League of

Nursing played a key role in supporting the education of nurses at two-year institutions. The initial nursing programs attracted female students who were considered non-traditional and typically ineligible for admission to the hospital diploma and baccalaureate programs (Orsolini-Hain & Waters, 2009). The meaning and obligation of caregiving responsibilities may be different between men and women, and it may have a greater impact on women's role overload.

Implications of the Study

An increased number of roles did correlate with role overload, but role overload did not correlate directly with, and was not predictive of, academic achievement. While role overload was not predictive of academic achievement, the single role of full-time caregiver was significantly associated with role overload and academic achievement. The implication is that full-time caregiving puts students at risk academically. Identifying this risk factor early benefits both student and faculty by allowing them to work together in addressing remediation and support services.

There was no correlation between study hours and work hours and academic achievement. The lack of correlation between study hours and academic achievement may indicate that quantity of study hours is not as important as the quality of study hours. Singh (1998) found moderate stress and/or role conflict was associated with superior performance, while low levels of role stressors can undermine performance. Students may be able to decrease their role overload and maximize study time by discovering their learning style and the environments in which they study to the greatest benefit (i.e.,

groups, surroundings, electronic vs. paper, etc.). The assumption that a certain number of hours of study are required per credit hour does not appear to hold true.

The negative relationship between work hours and academic achievement is also questioned by this study. Reyes et al. (2012) showed work pressure and job inadequacy correlated significantly and positively with the emotional exhaustion aspect of burnout. Other indices of role overload such as hours worked per week were not correlated with burnout, a concept closely related to role overload, but did correlate with academic achievement. Students who work may be more focused on academic responsibilities because of limited time. Greater focus and commitment may increase performance. Oneyman (2008) examined role conflict's effect on stress and performance and found both low and high levels of stress to be correlated with decreased performance. MacKenzie, Podasakoff and Ahearn (1988) found both role ambiguity and role conflict to be related to motivation and job performance. Students working in healthcare related fields may have an advantage if their employment experience correlates closely with academic work. Possible explanations for the lack of correlation between role overload and academic achievement include students may increase compensatory measures as role overload increases and other psychosocial factors in combination may have a larger impact on academic achievement than role overload.

High attrition rates among nursing students, especially among underrepresented minorities, have hampered efforts to improve workforce diversity (Childs et al., 2004). As of March 2000 there were an estimated 2,696,000 licensed registered nurses in the United States, and only about 16% were ethnic minorities. This data is indicative of an under-representation of minority nurses in the workforce (Stewart, 2005). Hill (1998)

and Mulholland et al. (2008) found that all ethnic and culturally diverse groups (Blacks, Hispanics, Asian/Pacific Islanders and American Indians/Alaskan Natives) are underrepresented in all nursing practice areas, including clinical sites, education, and research. Furthermore, it is projected that a large majority of the nursing jobs in the 21st century will be in nontraditional settings such as community-based facilities, ambulatory clinics, and home settings that will consist of a diverse multicultural population (Stewart, 2005). Barriers faced by minority nursing students include inadequate academic preparation, financial need, and poor English skills. These and other potential psychosocial factors may prevent successful completion of nursing programs (Zuzelo, 2005). Efforts to identify and implement effective strategies to recruit and retain minority students in nursing education programs must be a top priority to align with the goals of the American Nurses' Association (Hill, 1998; Mulholland et al., 2008).

Another key characteristic distinguishing non-traditional students from other college students is the high likelihood that they experience significant other life roles that compete with the student role while attending school (Ross-Gordon, 2007). These competing roles include those of worker, spouse or partner, parent, caregiver, and community member. Although these roles can be assets, they can also present additional challenges in students' allocation of time related to course work (Ross-Gordon, 2007). Mature and non-traditional nursing students are also more likely to be disproportionately represented in lower socioeconomic groups. Therefore, it is not surprising that work, financial constraints, and childcare issues have been associated with higher attrition rates in non-traditional nursing students (Cuthbertson et al., 2004). One study found age, marital status, and number of children to be contributing factors to attrition (Potolsky et

al., 2003). Johnson et al.,(2009) identified risks such as student age being greater than 30 and having at least one child as risk factors for attrition. Additionally, typical indicators of success such as GPA and entrance exam scores are not as predictive for this group of students; therefore, other predictors need to be identified (Bryant, 2001).

Nursing programs attracting and admitting older nontraditional students must address and meet the needs of this unique group by recognizing the shift and considering the implications for course planning and outcomes. Increased flexibility of course scheduling, online course availability, and increased availability of support resources are potential ways programs can adapt to serve the needs of this changing student population.

The nursing profession continues to be predominantly women (McLaughlin, Muldoon, & Moultray, 2009) and caregiving is a primary role for women in American culture. A study done by Home (1998) found that women with jobs and families enrolled in adult education, social work, or nursing identified the perceived intensity of student demands was the strongest predictor of conflict and role overload, with family and job demands coming next. Universities are seeing increased numbers of adult learners who must manage concurrent roles in the family, workplace and community (Home, 1998). The pressures of achieving academically, performing in the workplace, and maintaining family and personal responsibilities are equally important to these students. The effect of stress from the domains of work and home cannot be separated (Chapman & Orb, 2001). Reilly (1982) also found working wives were somewhat more likely to report role overload. Therefore, if caregiving has a negative impact on work performance, as it does on academic achievement, then the impact on performance of women in the workplace may be much more widespread. If caregiving has an impact on nurses in practice, it

may have ramifications that negatively affect patient care. The study by Chou and Robert (2008) indicated that institutional support, coworker support, and role overload are each independently associated with job satisfaction. They found workplace support was not enough to buffer the relationship between role overload and job satisfaction, and that other measures such as reducing work load and changing work duties to decrease role overload may also be indicated.

Associate degree nursing programs help alleviate the nursing shortage by educating nurses who go on to provide quality patient care to an underserved and diverse population of patients (Orsolini-Hain & Waters, 2009). The Institute of Medicine (IOM) recommends increasing the proportion of Bachelor of Science Nurses (BSN) to 80% by 2020 (IOM, 2010). Improving attrition rates at the associate degree level will help meet this national healthcare initiative by providing qualified nurses that may transfer into baccalaureate degree programs.

Significance of the Study

Nursing program attrition rates of 20-40% across the United States are a significant factor contributing to the nursing shortage. Rouse and Rooda (2010) project the current number of nursing graduates is too low to keep pace with the projected need. With the current and projected nursing shortage nationwide, it is of the utmost importance for nursing educators to reduce attrition and improve the achievement of nursing students in order to attract, retain, and graduate students who can successfully enter the nursing workforce and provide quality patient care. Many studies have explored academic predictors of achievement, but psychosocial predictors are underrepresented in the literature. This study sought a relationship between the psychosocial phenomenon of

role overload and academic achievement as a potential predictor of academic achievement. While no direct correlation was found, the study addresses a gap in the literature on role overload and academic achievement. A statistically significant negative relationship was found between caregiving and academic achievement. This psychosocial factor may be useful in identifying students at risk for attrition.

Johnson et al. (2009) highlighted the importance of developing a valid tool to identify students at risk for attrition early in the nursing program by assessing both cognitive and non-cognitive risk factors. The key roles played by early identification of academic and psychosocial factors emphasize the need for instruments that can identify and address risk factors early in the nursing programs. There is evidence in the literature that supports increasing students' awareness of the effects of psychosocial factors may also improve student retention (Williams, 2010).

Nursing Education

Analysis of psychosocial factors and how those factors affect nursing student academic achievement may help to reduce attrition rates. Although there was no significant relationship between role overload as measured by the Reilly Role Overload score and academic achievement, a relationship was found between role overload scores and students that engage in caregiving for over 40 hours per week. Students who are caregivers for over 40 hours also have lower academic achievement. Caregiving appears to exact a particularly heavy toll on student performance. Identifying students committed to caregiving close to or over 40 hours per week by having them complete a student entrance survey that includes caregiving as a risk factor and increasing faculty may improve educators' ability to provide support for this at risk student group.

Developing and evaluating the effectiveness of interventions such as early identification of at risk students, and faculty and peer mentoring for those with heavy caretaking responsibilities would be an important task for future research. A main obstacle to graduating qualified nurses into the workforce to address the nursing shortage is the 20 to 50 percent student attrition rates experienced in nursing programs across the country (Buchan, 2006; Peterson, 2009). The attrition rate at the participating institution where the research was conducted is 40% - 50%, and they currently survey students on work hours and study hours at the beginning of the nursing program. Utilizing psychosocial factors such as caregiving responsibilities to augment academic predictors of nursing student achievement has the potential to reduce attrition, increase graduation rates, and utilize already limited nursing education resources more efficiently. Educating students and faculty about the risk associated with excessive caregiving will provide the opportunity to identify resources such as peer and faculty mentoring, remediation, and additional financial assistance. Also, nursing programs may want to explore increasing the times and availability of student resources to accommodate students with other commitments. Finally, nursing programs may want to consider curricula that provide more flexible scheduling and online curriculum options to support students with caregiving responsibilities. Improving resources for at risk students may decrease nursing student attrition rates, decreasing the nursing shortage, and ultimately impact patient care.

Nursing Practice

High nursing student attrition rates directly impact the nursing shortage. The United States Department of Labor Bureau of Labor and Statistics (BLS) (2011)

projected the need for 495,000 replacements in the nursing workforce, bringing the total number of job opening for nurses due to growth and replacements to 1.2 million, by 2020. BLS predicts the number of nursing jobs will grow from 2.62 million in 2008 to 3.2 million in 2017, a 22 percent increase. At the same time 458,000 will leave the profession. By 2020, the RN workforce will be approximately 20% below projected requirements (Robert Wood Johnson Foundation, 2010). Due to the aging of the Baby Boomer population, the need for healthcare is expected to continue to grow. While the need for nurses increases, nursing schools are struggling to expand capacity to meet the rising demand (Buerhaus, Staiger, & Auerbach, 2000). This research found a relationship between caregiving hours and academic performance. Academic performance is directly related to nursing student attrition, and nursing student attrition directly impacts the nursing shortage. Therefore, students experiencing role overload due to excessive caregiving hours has a connection to the nursing shortage and nursing practice. A nursing shortage affects nurse-patient care ratios and has also been shown to affect the quality of patient care (Buerhaus, 2008). The majority of RNs (79%) and Chief Nursing Officers (68%) believe the nursing shortage is affecting the quality of patient care in hospitals, long-term care facilities, and ambulatory settings. Most hospital RNs (93%) report time constraints due to poor staffing that result in decreased patient safety, inability to detect complications early, and reduced collaboration with fellow healthcare professionals (Buerhaus, 2008). Therefore, improving early identification of at risk students, providing peer and faculty mentoring resources, increasing the availability of remediation resources, providing flexible scheduling, and providing financial assistance for students at risk due to excessive caregiving hours may decrease nursing student

attrition, and subsequently the nursing shortage and the number of nurses available to provide quality patient care.

Nursing Research

The current literature indicates a lack of research on psychosocial factors related to nursing student attrition. Although the Reilly Role Overload Scale was reliable, it was not predictive for academic achievement in this associate degree nursing student population. This indicates that role overload alone is not predictive of academic achievement. As found with caregiving over 40 hours per week, the type of roles an individual fills may be more important than the perceived overload. The significant finding that students committing to a greater number of caregiving hours have lower academic performance in associate degree nursing students adds to the body of research knowledge. The findings support the relationship between caregiving hours and role overload and academic achievement as illustrated in the Role Overload Model as adapted by Wight (2013) from Reilly (1982) in Figure 2. The research also showed women were more likely to experience role overload than men. This confirms that academic factors alone are insufficient to predict nursing student attrition and further research to identify and examine the emotional components of caregiving that may impact academic achievement is warranted and recommended.

Health/Public Policy

This research adds to the body of knowledge by eliminating role overload score as a predictor of academic achievement and therefore as a tool for decreasing attrition rates and impacting the nursing shortage. The study did find a relationship between caregiving hours equaling or exceeding a full-time job, and this knowledge may

impact policy by encouraging funding for additional research opportunities to explore the emotional factors affecting caregiving in this at risk student group. It may also provide more information to support additional financial aid and better allocate remediation, faculty and curriculum resources. For example, President Obama's American Graduation Initiative ("Graduation Initiative," 2009) specifically proposes innovative strategies to promote college completion. The college access and completion fund will provide funding for community college programs to decrease attrition and promote success, and this may be a resource for funding to assist students with limited resources and excessive caregiving hours.

As identified by Igbo et al. (2011), the best strategies to reduce attrition can be categorized into pre-entry, program orientation, advisement, study skills, remediation, NCLEX preparation, and a student-friendly learning environment. The purpose of these programs is to identify at risk students early and provide mentoring, peer tutoring, and remediation. The Consortium to Advance Nursing Diversity and Opportunity (CANDO), which was funded by Health Resources and Services Administration (HRSA), has been successful in improving retentions rates primarily by early identification of at risk students and providing student mentoring, and can serve as a model to other nursing programs (Igbo et al., 2011).

Strengths and Limitations of the Study

Several limitations were identified in the study. Semester points were used as a measure of academic achievement, and although the Kuder-Richardson Formula 20 (a statistical measure that confirms the reliability of the exam) is performed on individual exams at the participating institution, there were no reliability measures on semester

points. This associate degree nursing program uses semester points for classwork, course exams, and standardized exams and may not represent its usage at other institutions. The indicators of academic achievement may be different at other institutions and may limit the applicability of the results.

Students self-reported information regarding work hours, study hours, and caregiving hours. Individuals typically over-report activities considered acceptable and under-report activities considered less acceptable. This may be a possible reason why no statistical significance was found between role overload and academic achievement. Another limitation is that the survey directed students to circle the roles they identified with, and it was assumed roles left unmarked were roles they did not identify with. More accurate results would have been obtained had the students been required to choose yes or no when identifying with each role.

In the discussion section, it was suggested that the reason for the lack of correlation between role overload and academic achievement may be due to other factors such as the prioritization of the roles, the quality of time in the roles, and/or the ability to compensate. A further limitation of the study is that the researcher does not have variables for the unobserved phenomenon such as learning style, motivation, and compensatory mechanisms, and therefore it is speculation.

A non-randomized convenience sample was utilized. This study was limited to one associate degree program, and therefore the findings and results of this study may not be generalizable to other nursing programs in other colleges and universities. A final limitation of the study was the novice status of the researcher.

The strengths of the study include the large sample size and high participation rate (82%). Also, the diversity of the nursing students enrolled in the ADN program ensured representation of minority groups commonly at risk for nursing student attrition. The instruments utilized for the study (HESI and Reilly's Role Overload Model) were reliable. Finally, a correlation was found between caregiving over 40 hours per week and academic achievement.

Recommendations for Future Study

Nursing students will continue to assume multiple roles, and the number and complexity of those roles has the potential to increase. However, there is a lack of literature addressing the effect of multiple roles on academic achievement. Further qualitative research may assist nurse educators exploring the association between assuming multiple roles alongside the student role, particularly those students with significant caregiving responsibilities. Fowler and Norrie (2009) found that multiple factors lead to student attrition and the use of an attrition risk prediction tool may reduce attrition. While attrition among nursing students is not a new phenomenon, there is little research focusing on its identification, prevention, and ramifications. Much of the research has been descriptive, and little theoretical understanding of attrition has been gleaned (O'Donnell, 2009). A qualitative study would allow the students to describe their experiences and develop themes that may define or differentiate the emotional component of caregiving that was not described in this research. The qualitative study would also provide information on quantitative instruments to assess other psychosocial factors and their relationship with academic achievement. Seeking correlation of academic achievement with other psychosocial factors besides role overload may prove

beneficial. In a qualitative study conducted by Marcia Wells in 2003, she found that nursing student attrition did not appear to be related to a single stressor.

The lack of correlation between work hours and academic achievement in this study did not take into account the effect of employment in healthcare-related fields. Specifying the nature of the student's employment will provide additional information that may reveal a correlation with academic achievement.

This study should be replicated at other associate and baccalaureate nursing programs to confirm the relationship between increased caregiving hours and academic achievement. Studying programs with a variety of demographic groups would confirm the premise that the demographics in this study did not significantly affect the results. The general term of caregiver was not strictly defined in this study. For example, it may be helpful to include the level of caregiving and the age and number of recipients. Defining and describing the attributes of the caregiver role may shed more light on its impact on academic achievement. Adebayo's (2006) research suggests that an increase in respondents' perceived workload is associated with a corresponding increase in perceived work-school conflict. Results revealed that work-school conflict has a significant positive relationship with social support. Results of the hierarchical multiple regression analysis show that perceived workload, supervisor, and coworker support are found to be significant predictors of work-school conflict. Additionally, it is recommended the structure of the survey be changed so students must specify positive or negative association with roles to clarify the student's intent on a blank response.

Developing and evaluating effective interventions for those with heavy caretaking responsibility would be an important task for future research. If heavy caregiving

responsibility has a negative effect on academic performance, it is plausible that it may have a negative effect on nursing performance and warrants extending this research to the practice setting.

Conclusion

The purpose of this predictive correlational study was to examine role overload as a predictor of academic achievement as measured by the semester HESI score and semester points in associate degree nursing students enrolled in a five-semester program. It also examined the relationship between selected demographic variables (age, gender, and ethnicity), hours worked, hours studied, and caregiving hours as potential indicators of role overload. A cross-sectional correlational design was selected for this research study to examine the relationship between the independent variables (role overload score, work hours, care giving hours, and study time) and the dependent variables (semester points and semester HESI scores). The participants were asked to complete a role overload questionnaire by Michael Reilly (1982) and a demographic survey. Statistical analysis was performed to evaluate relationships between various demographics, role overload scores, and academic achievement.

The study found there was no relationship between role overload and academic achievement. While the Reilly Role Overload Model was shown to be reliable, it was not a predictor of academic achievement. Age and ethnicity were not correlated with role overload, but a relationship between gender and role overload score was identified, with females having a statistically higher role overload score than males.

A single psychosocial factor, caregiving over 40 hours per week, was found to be significantly related to academic achievement. Students who have caregiving

responsibilities experience higher role overload, and also demonstrate lower achievement scores as measured by semester points and HESI scores. Caregiving over 40 hours has a significant negative impact on academic achievement. Identifying and supporting nursing students that are involved in caregiving over 40 hours per week may decrease attrition in this group.

This study added to the body of nursing knowledge on associate degree nursing student role overload. It provided statistics on nursing students, the roles they identify with, the amount of role overload they experience, and the demographic makeup of the group. The lack of relationship of work and study hours to academic achievement may be significant. Finding that more studying hours are not related to increased academic achievement suggests that the quality and methods of study are more significant than the quantity of time spent. This suggests a focus on learning styles and study methods may be more effective ways to decrease attrition.

This study has documented a relationship between psychosocial factors and academic achievement. While further research is needed to develop tools to identify the impact of various psychosocial factors on student performance, the literature base is improved each time a study is conducted and new knowledge about factors influencing academic achievement contributes to the science of nursing education.

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APPENDIX A
APPROVAL FROM BARRY UNIVERSITY'S
INSTITUTIONAL REVIEW BOARD



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OFFICE OF THE PROVOST
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Research with Human Subjects
Protocol Review

Date: September 22, 2014

Protocol Number: 140903

Title: "Does the Role Overload Preclude Academic Achievement in Associate Degree Nursing Student?"

Meeting Date: September 17, 2014

Researcher Name: Ms. Sharalyn Wight
Address: 9317 Wickham Way
Orlando, FL 32836

Faculty Sponsor: Dr. Paula Delpech
Nursing

Dear Ms. Wight:

On behalf of the Barry University Institutional Review Board (IRB), I have verified that the specific changes requested by the IRB have been made. Therefore, I have granted final approval for this study as exempt from further review.

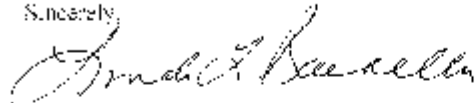
As principal investigator of this protocol, it is your responsibility to make sure that this study is conducted as approved by the IRB. Any modifications to the protocol or consent form, initiated by you or by the sponsor, will require prior approval, which you may request by completing a protocol modification form.

It is a condition of this approval that you report promptly to the IRB any serious, unanticipated adverse events experienced by participants in the course of this research, whether or not they are directly related to the study protocol. These adverse events include, but may not be limited to, any experience that is fatal or immediately life-threatening, is permanently disabling, requires (or prolongs) inpatient hospitalization, or is a congenital anomaly cancer or overdose.

The approval granted expires on December 1, 2015. Should you wish to maintain this protocol in an active status beyond that date, you will need to provide the IRB with an IRB Application for Continuing Review (Progress Report) summarizing study results to date.

If you have questions about these procedures, or need any additional assistance from the IRB, please call the IRB point of contact, Mrs. Barbara Cook at (305)899-3023 or send an e-mail to L.Bachelder@gmail.com. Finally, please review your professional liability insurance to make sure your coverage includes the activities in this study.

Sincerely,



Linda Bachelder, Psy.D., JD
Chair, Institutional Review Board
Barry University
Box Psychology
11300 NE 2nd Avenue
Miami Shores, FL 33161

Cc: Dr. Paula Delgado

Approved by Barry University IRB:

Date: SEP 22 2014

Signatures:

 Institutional Review Board
 Protocol Form
 February, 09 - 7

Appendix B

Informed Consent Form

Barry University Informed Consent Form

Your participation in a research project is requested. The title of the study is, "Does role overload predict achievement for associate degree nursing students?"

The research is being conducted by Sharon Wight, a student in the Nursing department at Barry University, and is seeking information that will be useful in the field of Nursing. The aims of the research are to gain further understanding of role overload and its relationship to associate degree nursing student achievement. In accordance with these aims, the following procedures will be used: Survey. We anticipate the number of participants to be a minimum of 215 associate degree nursing students.

If you decide to participate in this research, you will be asked to do the following: participate in a 30 minute survey.

Your consent to be a research participant is strictly voluntary and should you decline to participate or should you choose to drop out at any time during the study, there will be no adverse effects on your grades or nursing program progress.

There are no known risks to you involved with your participation in this study.

Although there are no direct benefits to you, your participation in this study may help our understanding of "role overload and achievement in associate degree nursing student."

As a research participant, information you provide will be held in confidence to the extent permitted by law. Any published results of the research will refer to group averages only and no names will be used in the study. Data will be kept in a locked file in the researcher's office. Your signed consent form will be kept separate from the data. All data will be destroyed after five years.

If you have any questions or concerns regarding the study or your participation in the study, you may contact me, swight@valenciacollege.edu, at (407) 582-1589, my supervisor *if applicable*, Dr. Paula Delpech at pdelpech@gmail.com or barry.edu, at (305) 899-3821 or the Institutional Review Board point of contact, Barbara Cook, at (305) 899-3000. If you are satisfied with the information provided and are willing to participate in this research, please signify your consent by signing this consent form.

Voluntary Consent

I acknowledge that I have been informed of the nature and purposes of this experiment by Sharon Wight and that I have read and understand the information presented above, and that I have received a copy of this form for my records. I give my voluntary consent to participate in this experiment.

 Signature of Participant Date

 Researcher Date Witness Date

Human Resources
Protocol Form
February, 2008

2) Was signatory or an adult only if a screen involved program women, children, other vulnerable populations, or if more than minimal risk is present.

APPENDIX B
APPROVAL FROM VALENCIA COLLEGE'S
INSTITUTIONAL REVIEW BOARD

Version 07/15/11

VALENCIA COLLEGE
Human Research Protection (HRP) Institutional Review Board (IRB)

IRB Determination Form

Title of Research Protocol: "Does Role Overload Predict Academic Achievement in Associate Degree Nursing Students?"

Principal Investigator (PI): Sharalyn Wight

Date Received by IRB Chair: 10/1/2014

IRB Number: 15-0003E

Based on the IRB Protocol Initial Submission Form (or, as appropriate, the IRB Continuing Review/Termination Form or the IRB Addendum/Modification Form) submitted by the Principal Investigator and for the project identified above, the following determination has been made by the Valencia IRB:

- The research is exempt from IRB review. Exemption category: 2
- The research is eligible for expedited review and has been approved.
- The research is eligible for expedited review but requires modifications and re-submission before approval can be given.
- The research is subject to full review and will be discussed at the next IRB meeting, currently scheduled for _____ (date).
- The research has been subjected to full review and has been approved.
- The research has been subjected to full review and has been disapproved.

Period of Approval: 10/1/2014 to 10/1/2014
 (cannot be retroactive)

Exemption from Valencia IRB review does not exempt the PI or Co-PI from compliance with all applicable institutional, Federal, State, and local rules, regulations, policies, and procedures.

Although the IRB has determined that this application is exempt from IRB review, the Principal Investigator is encouraged to read, understand, and apply the attached Investigator Responsibilities document, which is required of Principal Investigators whose research protocols are approved under the Valencia IRB full or expedited review process.

If you have any remaining questions about Valencia's IRB process, contact the IRB Chair at irb@valenciacollege.edu



Signature of IRB Chair or Designated Representative 10/01/2014
 Date

C: IRB File, IRB Members, PI Supervisor/Administrator

APPENDIX C
BARRY UNIVERSITY
DEAN ACCESS LETTER

Barry University Division of Nursing

Date:

To:

Dear Dean,

As a doctoral student with Barry University in Miami, Florida, I am requesting access to Valencia College Nursing students enrolled in semesters I-V for the Fall of 2014 to conduct a voluntary survey. I am conducting a correlational study titled ***“Does Role Overload Predict Academic Achievement in Associate Degree Nursing Students?”*** to evaluate the effects of role overload in associate degree nursing students. The survey will require 30 minutes of class time for data collection, and access to the students’ semester points and HESI scores at the end of the term. To ensure anonymity and to reduce the possibility of coercion, it will also require 90 minutes from an Advanced Track Faculty member to collect data for the researcher’s course level.

If you have any questions or concerns regarding the study, you may contact me or the following individuals associated with this study at:

Researcher:	Shari Wight	407-582-1589
Research Supervisor:	Dr. Paula Delpech	305-889-3821
Barry University IRB:	Barbara Cook	305-899-3020
Valencia College IRB:	Dr. Laura Blasi	407-582-3846

Thank you for permitting access to your College nursing students.

Sincerely,

Sharalyn Wight

APPENDIX D
BARRY UNIVERSITY
COURSE LEADER ACCESS LETTER

Barry University Division of Nursing

Date:

To:

Dear Course Leaders,

As a doctoral student with Barry University in Miami, Florida, I am requesting access to Valencia College Nursing students enrolled in semesters I-V for Fall of 2014 to conduct a voluntary survey. I am conducting a correlational study titled *“Does Role Overload Predict Academic Achievement in Associate Degree Nursing Students?”* to evaluate the effects of role overload in associate degree nursing students. Access would include a 30-minute time period during lecture for the researcher to distribute, complete, and collect a Role Overload Survey and a Demographic Questionnaire. The study will also require the course leader to complete a researcher provided Excel spreadsheet with the participating students’ semester points and HESI scores.

If you have any questions or concerns regarding the study, you may contact me or the following individuals associated with this study at:

Researcher:	Sharalyn Wight	407-582-1589
Research Supervisor:	Dr. Paula Delpech	305-889-3821
Barry University IRB:	Barbara Cook	305-899-3020
Valencia College IRB:	Dr. Laura Blasi	407-582-3846

Thank you for permitting access to Valencia College nursing students.

Sincerely,

Sharalyn Wight

APPENDIX E
PARTICIPANT COVER LETTER

Barry University
Cover Letter

Dear Research Participant:

You are invited to participate in a research project titled “*Does Role Overload Predict Academic Achievement in Associate Degree Nursing Students?*” The research is being conducted by Sharalyn Wight, a student within the Division of Nursing within the College of Health Sciences at Barry University. The purpose of the research is to measure role overload scores and correlate them to the student’s semester points and semester HESI achievement scores.

To participate you should be 18 years or older and currently enrolled in a Valencia Nursing course for the Fall of 2014. The anticipated number of participants is a minimum of 215 students. If you decide to participate in the research, you will be given a 13-item Role Overload survey and 7-item demographic questionnaire that will include your Valencia ID only. Participation and completion will take less than 30 minutes. The surveys will then be placed in a sealed envelope by the participant to ensure privacy.

Participation is **strictly voluntary** and should you decline to participate or drop out at any time during the study, there will be no adverse effects on your grade and/or progression in the nursing program. **A returned, completed questionnaire will indicate consent for voluntary participation**, and permission for your course leader to release your semester points and semester HESI score at the end of the semester. There are no known risks to you for participating in this study. There are also no direct benefits to you, although information from the study may benefit nursing students in general by identifying risk factors for attrition.

During data collection process, the data will be identified only by the Valencia ID Number provided by the participant and will be de-identified after data collection and collation. **The researcher will have no access to the participants’ identification during data processing.** The hard copies of data will be kept in a locked file in a locked office and destroyed after a period of five years. The data will also be stored on the researcher’s password protected computer during statistical analysis. Protection of participant’s privacy and anonymity is of primary concern to the researcher. By completing and returning this survey you have shown your agreement to participate in the study.

If you have any questions or concerns regarding the study or your participation in the study, you may contact me, Sharalyn Wight, at (407) 582-1589, my academic advisor Dr. Paula Delpech at 305 899-382, Barry University Institutional Review Board point of contact Barbara Cook at (305) 899-3020, or Dr. Laura Blasi, Valencia College Institutional Review Board point of contact, at (407) 582-3486. Thank you for your participation.

Sincerely,

Sharalyn Wight

APPENDIX F
RECRUITMENT FLYER

ATTENTION NURSING STUDENTS!



MAKE YOUR VOICE HEARD!

STAND UP AND BE COUNTED!

Students at least 18 years old and enrolled in the ADN program for Fall 2014 who are able to provide consent are invited to participate in a Barry University research study titled, *"Does Role Overload Predict Academic Achievement in Associate Degree Nursing Students?"* to evaluate the effects of role overload in Associate Degree nursing students. Students must be willing to spend up to 30 minutes of class time completing a survey and demographic questionnaire. All information will be strictly confidential and not used for purposes other than the study.

Participation will not affect your grade.

The information you provide will be used to evaluate the effects of activities and obligations outside of the nursing program on academic performance. The data may provide a valuable resource to help future nursing students succeed while juggling the demands of work, family, parenting, and school.

Your contribution is essential to the success of the study and will be greatly appreciated!

If you need more information about the study or have questions about your rights before or during participation please contact:

Researcher:	Sharalyn Wight	407-582-1589
Research Supervisor:	Dr. Paula Delpech	305-889-3821
Barry University IRB:	Barbara Cook	305-899-3020
Valencia College IRB:	Dr. Laura Blasi	407-582-3846

APPENDIX G

Demographic Survey

Please **circle** the correct answer or **fill in the blank**.

1. Male Female
2. What is your age? _____
3. What is your ethnic background?
 - White (not Hispanic or Latino)
 - Black (not Hispanic or Latino)
 - Hispanic
 - Caribbean Which Island? _____
 - Asian
 - American Indian
 - Alaskan
 - Multi-Racial/Other (please specify ethnicity)_____
4. How many hours on average do you work per week? _____
5. How many hours on average do you study per week? _____
6. How many hours on average do you spend taking care of a dependent (children, elderly, and/or disabled persons) per week? _____
7. Please circle the roles you identify with:
 - Student employee spouse/partner parent (number of children? _____)
 - caretaker (elder or disabled adult)

APPENDIX H

ROLE OVERLOAD SCALE

Role Overload Scale – Reilly (1982)

The following are statements related to the many different roles in your life. Please rate each question from 1-strongly disagree to 5-strongly agree by circling the corresponding number.

Please answer these questions as honestly and accurately as possible.	Strongly	Somewhat	Not	Somewhat	Strongly
	Disagree	Disagree	Sure	Agree	Agree
1. I have things to do which I don't really have the time and energy for.	1	2	3	4	5
2. There are too many demands on my time.	1	2	3	4	5
3. I need more hours in the day to do all the things which are expected of me.	1	2	3	4	5
4. I can't ever seem to get caught up.	1	2	3	4	5
5. I don't ever seem to have any time for myself	1	2	3	4	5
6. There are times when I cannot meet everyone's' expectations.	1	2	3	4	5
7. Sometimes I feel as if there are not enough hours in the day.	1	2	3	4	5
8. Many times I have to cancel commitments.	1	2	3	4	5
9. I seem to have to overextend myself in order to be able to finish everything I have to do.	1	2	3	4	5
10. I seem to have more commitments to overcome than some other people I know.	1	2	3	4	5
11. I find myself having to prepare priority lists (lists which tell me which things I should do first) to get done all the things I have to do. Otherwise I forget.	1	2	3	4	5
12. I feel I have to do things hastily and maybe less carefully in order to get everything done.	1	2	3	4	5
13. I just can't find the energy in me to do all the things expected of me.	1	2	3	4	5

Completion of this survey constitutes consent for participation in the study and consent for the course leaders to release your semester points and HESI scores for use in compiling statistical data. All information provided will be kept secure and no personal information will be used or stored with the data.

V									
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Identification Number

APPENDIX I

PERMISSION TO USE REILLY ROLE OVERLOAD SCALE

University of Chicago Press

Permissions Department
1427 East 60th Street
Chicago, IL 60637
Phone: 773-702-6096 / Fax: 773-702-9756

Permission Grant

Shari Wight
Professor of Nursing
Valencia College
1800 S Kirkman Rd
Orlando, FL 32811

Date: January 27, 2014
Grant Number: 107800
Request Date: 01/26/2014
Reference Number: 0049538304

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Reference	ISBN	Materials	ExtPrice
0049538304	1502	Reilly, JOURNAL CONSUMER RESEARCH "Working Wives and Convenience Consumption" 8:4 (1982), pp. 407-418: Reilly Role Overload Questionaire	\$0.00
Order Total:			\$0.00
Handling:			\$0.00
Tax:			\$0.00
Sub Total:			\$0.00
Payments:			\$0.00
Balance Due:			\$0.00

For Use In:
a dissertation by Shari Wight for a degree in Nursing at Barry University

Approved By: _____, Perry Cartwright, Rights & Permissions

APPENDIX J
HYPOTHESES TABLE

Hypothesis Table

Research Question	Research Hypothesis	Instrument	Statistical Test	Results
Does role overload predict academic achievement?	There is a significant negative correlation between the role overload score and academic achievement as measured by semester HESI score and semester points.	Role Overload Survey Semester Points Semester HESI Score	Pearson Correlation	The hypothesis was rejected
Is there a significant relationship between work hours, study hours, and caregiving hours and academic achievement?	There is a significant negative relationship between work hours, and caregiving hours and academic achievement as measured by semester HESI score and semester points as well as a significant positive relationship between study hours and academic achievement as measured by HESI score and semester points	Role Overload Survey Demographic Survey	Multiple Linear Regression	The hypothesis was rejected
Is there a significant relationship between work hours, study hours, and caregiving hours and role overload?	There is a significant positive relationship between work hours, study hours, and caregiving hours and role overload score	Role Overload Survey Demographic Survey	Multiple Linear Regression	The hypothesis was accepted
Is there a significant relationship between selected demographic variables (age, gender, and ethnicity) and role overload?	There is a significant relationship between selected demographic variables (age, gender, and ethnicity) and a role overload score	Role Overload Survey Demographic Survey	Pearson Correlation	The hypothesis was accepted

APPENDIX K

NIH CERTIFICATE

3/3/2014

Protecting Human Subject Research Participants



APPENDIX L

VITA

Sharalyn Wight
9317 Wickham Way, Orlando, Florida 32836
swight@valenicacollege.edu
407 925-3684

Objective	Teach undergraduate nursing students and contribute to research on attrition and academic achievement
Licensure and Certifications	State of Florida- current through April 2015 State of Ohio -1986 to 1993 State of Indiana-1984 to 1986
Education	<p>Undergraduate School Bachelor of Science in Nursing, Indiana University 1984</p> <p>Graduate School Master of Science in Nursing, Florida Southern College, 2008 PhD Nursing Student, Barry University 2011 to present</p>
Professional Experience	<p>Nursing Professor <i>Valencia College Orlando, Florida 2007-present</i> Nursing Professor- responsible for lecture, clinical, and simulation</p> <p>Clinical Internship <i>Florida Hospital Kissimmee, Florida 2006-2008</i> Quality Assurance</p>
Awards and Honors	Certified Nurse Educator, August 2014 Digital Professor Certification, June, 2014 Valencia College Tenure, April 2014
Academic and Professional Activities	Sigma Theta Tau, Chapter-Florida Southern College Florida League of Nursing, Board Member National League of Nursing Ambassador Florida Nurses Association