

THE RELATIONSHIP AMONG ROLE STRESS, STRUCTURAL EMPOWERMENT
AND BURNOUT IN NEWLY GRADUATED NURSES WORKING IN
ACUTE CARE HOSPITALS

by

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A Dissertation submitted to the
Graduate School–Newark
Rutgers, The State University of New Jersey

In partial fulfillment of the requirements

For the degree of

Doctor of Philosophy

Graduate Program in Nursing

Written under the direction of

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And approved by

Newark, NJ

May 2015

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ABSTRACT OF THE DISSERTATION

The Relationship among Role Stress, Structural Empowerment and Burnout in Newly
Graduated Nurses Working in Acute Care Hospitals

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Burnout has been theorized as occurring within the early years of a career. Role stress, which has three components; role ambiguity, role conflict and role overload, has been identified in new graduate nurses and has been positively correlated with burnout in the empirical literature. Empowerment has an inverse relationship with burnout. Support for these hypothesized relationships in newly graduated nurses has been demonstrated in research conducted in other countries. The purpose of this study was to examine the relationship among role stress, empowerment, and burnout in newly graduated nurses with two years of experience or less working in acute care hospitals.

A descriptive correlational research design was utilized to examine the hypothesized relationships in a sample of 107 newly graduated nurses. Participants responded to questions online from various instruments which measured role stress, empowerment and burnout. All three role stress variables had significant positive correlations with burnout and empowerment had a significant inverse correlation with

burnout. Regression analysis was used to test the hypotheses that empowerment would moderate the relationship between each of the role stress variables and burnout.

In this study, 75% of new graduates reported burnout and the moderation model was not supported. Researchers have identified the presence of burnout in newly graduated nurses and the negative impact on the nurse, the patient, the organization and the profession. The findings from this study suggest that health care organizations need to examine and if necessary, improve their work environments. It may be less costly for hospitals to implement strategies to decrease burnout among new graduates such as establishment of an empowering work environment, elimination of role ambiguity, prevention of role conflict and reduction of role overload that are supported in the literature rather than absorb the costly financial impact of burnout.

Keywords: *burnout, role stress, empowerment, newly graduated nurse, role ambiguity, role conflict, role overload*

Acknowledgements and Dedication

I would like to thank my Dissertation Chair and Advisor, Dr. Lucille Eller. Throughout the dissertation phase of my doctoral studies, Dr. Eller was supportive, nurturing and available to assist me with each aspect of the dissertation. Her encouragement and understanding gave me the strength to continue pursuing my doctoral degree. I am extremely grateful to Dr. Eller for sharing her expertise and experience.

I would also like to thank my committee members, Dr. Cary Cherniss, Dr. Linda Flynn and Dr. Jeannie Cimiotti for sharing their expertise and wisdom. Their guidance and proficiency as researchers enhanced this dissertation. In addition, I could not have completed this dissertation without the assistance and friendship of my colleague Dr. Ann Marie Mazzella. Our constant discussions about course requirements were extremely beneficial. Together we discovered how to analyze data and write a doctoral dissertation.

I also dedicate this dissertation to my four children and their spouses. I appreciate their constant encouragement and support. I am especially grateful to my daughter Liz who shared her knowledge of statistics and offered assistance and guidance whenever a question arose.

Most of all, I dedicate this dissertation to my husband, Augie, who has consistently supported me throughout my professional career, in my quest to flourish as a professional nurse. He has been my partner and friend throughout our entire marriage.

I could not have accomplished this dissertation without the support of everyone mentioned above.

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Chapter I. The Problem

Burnout is a complex syndrome that has been identified among registered nurses who provide direct patient care. The prevalent cost-cutting strategies in the health care industry have resulted in increased workloads, minimal autonomy, inefficient systems and decreased resources (Leiter & Laschinger, 2006; Kanai-Pak, Aiken, Sloane & Poghosyan, 2008; Laschinger, Finegan & Wilk, 2009; Garrosa, Moreno-Jimenez, Rodriguez-Munoz & Rodriguez- Carvajal, 2011). These organizational changes have resulted in stressful working conditions and have contributed to the development of burnout among nurses (Hayes et al, 2006; Hochwalder, 2007; Garrosa, et al., 2011).

Research has shown that burnout has a negative effect on the individual, the organization in which the individual works and the profession at large. The effects of burnout on the individual may include psychological distress and somatic complaints (Maslach, Schaufeli & Leiter, 2001; Laschinger & Grau, 2012) and self-reported depression, anxiety, sleep disturbances, memory impairment, neck and back pain (Peterson, Demerouti, Bergstrom, Samuelsson, Asberg & Nygren, 2008). At the organizational level, burnout can lead to employee absenteeism (Schaufelli & Enzmann, 1998), job dissatisfaction (McHugh, Kutney-Lee, Cimiotti, Sloane & Aiken, 2011) and provision of employee health care for somatic and psychological complaints (Laschinger & Grau, 2012). In addition, burnout has a negative impact on the profession since it has been linked to the retention of nursing staff. Reports from hospital nurses revealed that one in five nurses intended to leave their current position within one year (Aiken, et al, 2001). Burnout may also result in a lack of nurse engagement in the profession due to a

loss of commitment and motivation (Demir, Ulusoy & Ulusoy, 2003; Maslach, et al., 2001; Cho, Laschinger & Wong, 2006; Laschinger, et al., 2009; Garrosa, et al., 2011).

Burnout is prevalent among nurses. A multi-state study examined burnout levels among employed nurses, of which, 51 % were direct patient care providers employed in hospitals. Of the 68,488 nurse participants, 34 % reported experiencing high levels of burnout (McHugh, Kutney-Lee, Cimiotti, Sloane & Aiken, 2011). Similar findings were reported in a study of 98,116 nurses from nine countries. High levels of burnout were reported in more than 33 % of the nurses in each country (except Germany), with results as high as 60% for Japan. Among United States nurses (N =39,148), 33% reported high levels of burnout (Aiken, et.al, 2011).

Burnout

Burnout is a phenomenon that was first introduced in the literature by Freudenberg (1974) while working with human service professionals. The concept of burnout was developed to capture the realities of people's chronic stress experience in the workplace. This concept has been studied over the last 25 years within theoretical frameworks and empirical studies. Although initial research focused only on health service professionals (Maslach & Jackson, 1981), burnout has now been studied in all occupations (Maslach, Jackson & Leiter, 1996; Richardsen & Martinussen, 2005). Research on this topic began with a focus on burnout resulting from an individual's response to chronic stress in the work place and has expanded to address the interaction of the individual and their work environment (Maslach, et al., 2001).

The burnout syndrome has three dimensions: emotional exhaustion, depersonalization and lack of personal accomplishment. The emotional exhaustion

component develops from chronic stress and the person's response to being overworked, which leads to the depletion of a person's emotional resources. Depersonalization occurs as a coping mechanism to detach oneself from the clients or the job. The development of impersonal relationships with clients allows a person to avoid stress. Lack of personal accomplishment develops when an individual experiences lack of achievement at work or feelings of incompetence (Maslach & Goldberg, 1981; Maslach, 1982).

Theorists posit that burnout is a process which develops over time in response to chronic stress, both emotional and interpersonal, that occurs in the work environment (Cherniss, 1995; Freudenberger, 1974; Maslach, 1982, 2003; Maslach, et al., 2001). Organizational factors which significantly influence the development of burnout are excessive workload, role stress, lack of support, poor communication between members of the health care team, caring for acutely ill patients, and lack of control over the work environment (Leiter & Maslach, 1988; Hatcher & Laschinger, 1996; Demir, et al., 2003; Maslach, et al., 2001; Riahi, 2011).

Role Stress

Role stress has been identified by Kahn, Wolfe, Quinn, Shoek, and Rosenthal (1964) as having three components: role ambiguity, role conflict and role overload. Role ambiguity was defined as a person not knowing what is expected of them within a certain role. Role conflict was defined as incompatible expectations for a certain role. This can occur from a conflict between a person's values and the expectations of a role, from a conflict between several roles for the same person which require different behaviors or from conflicting messages from various senders. Role overload has been

associated with inadequate time and resources to complete the expectations of a role. These role stress variables have been identified as antecedents to burnout by Cordes and Dougherty (1993), Gil-Monte, Valcarcel and Zornoza, (1993) and by Ortqvist and Wincent (2006) in their meta-analysis of 300 articles. The relationship between role stress and burnout in nurses has been investigated in numerous research studies (Chang, Hancock, Johnson, Daly & Jackson, 2005; Lee, Song, Cho, Lee & Daly, 2003; Gil-Monte, et al. 1993; Chang & Hancock, 2003; Garrosa, et al., 2011). Nurses consistently report high stress levels due to an increased number of patients with higher acuity and less resources. As a result, nurses have too much to do in very little time and are at risk for experiencing high levels of burnout (Aiken, Clarke, Sloane, Sochalski & Silber, 2002).

Structural Empowerment

Current trends in the nursing literature suggest an inverse relationship between empowerment and burnout in staff nurses (Cho, et al., 2006; Laschinger, et al., 2009; Harwood, Ridley, Wilson & Laschinger, 2010; O'Brien, 2011).

Empowerment, according to Kanter (1993), is derived from working in an organization that has an opportunity for development as well as access to power, described as formal or informal, which is needed to accomplish the demands of the job. Kanter (1993) defines power not as coercion or domination but rather as the capacity to accomplish work, which is strongly related to structural components within an organization. Empowerment is defined as having access to the power needed to carry out one's job and opportunity for growth (Kanter, 1993). The components of structural empowerment as described by Kanter (1993) are opportunity, information, support and

resources. Access to these organizational structures is determined by the amount of formal and informal power a person has within the organization (Kanter, 1993).

These workplace structures influence the attitudes and behaviors of the employees. When the workplace lacked these structures, employees experienced powerlessness. Empowerment has been associated with low levels of emotional exhaustion and depersonalization and high levels of personal accomplishment (Hatcher & Laschinger, 1996). Researchers have reported the significant impact of the work environment on the development of burnout in nurses (Aiken, et al., 2001; Aiken, et al., 2002; Laschinger, Finegan, Shamian & Wilk, 2003; Laschinger, et al., 2009; Laschinger, Grau, Finegan & Wilk, 2010; Laschinger & Grau, 2012).

Newly Graduated Nurses

Newly graduated nurses entering the profession are at high risk for role stress, perceptions of powerlessness and burnout as a result of their limited clinical experience and high level of stress during their role transition from student nurse to registered nurse (Almada, Carafoli, Flattery, French & McNamara, 2004; Kovner et al., 2007). Although research supports the relationship between role stress, structural empowerment and burnout in staff nurses (Lee et al., 2003) to date, there has been no research examining these variables in newly graduated nurses within their first two years of employment in the United States.

Hospitals have experienced new graduate turnover rates of 35% to as high as 60% within their first year of employment (Beecroft, Kunzman & Krozek, 2001). Bowles and Candela (2005) reported that 30% of newly graduated nurses left their job in the first year and 57% left by the end of two years of employment. Casey, Fink,

Krugman and Propst (2004) found that it took a minimum of 12 months for newly graduated nurses to begin to feel confident in their role and these nurses reported dissatisfaction with their work environment and their lack of power to influence change.

Cho et al. (2006) conducted the first study that examined burnout and empowerment in newly graduated nurses (n =226), where 66% of these Canadian nurses, reported high levels of burnout. Rudman and Gustavsson (2011) examined burnout in a cohort of newly graduated nurses in Sweden. This longitudinal study began in their senior year of education followed by a repeat survey once a year for three years after graduation. A total of 687 (60%) of the original cohort, completed the burnout survey for all three years after graduation. The results revealed that during the first three years, one out of every five nurses experienced burnout. A significant increase and the highest levels occurred during the second year post graduation, with every second newly graduated nurse reporting high levels of burnout. The authors recommended that additional research on this population focus on examining those working for at least two years to identify the prevalence of burnout during this interval post-graduation.

With high burnout levels being reported in newly graduated nurses, it is essential to identify the modifiable factors that are the antecedents in order to prevent or minimize the negative consequences of burnout for both nurses and the quality of care. Based on the empirical literature, this study will define a newly graduated nurse as having two years of experience or less working as a licensed professional registered nurse in an acute care facility.

Purpose of the Study

The purpose of the study is to address the gap in the literature by examining the relationships among role stress, structural empowerment and the development of burnout in newly graduated nurses with two years of experience or less working in an acute care hospital.

Problem Statement

What are the relationships among role stress, structural empowerment and the development of burnout in newly graduated nurses with 2 years of experience or less, working in an acute care facility? Does structural empowerment moderate the effects of role stress on burnout in newly graduated nurses?

Sub-problems

- 1.) Is role stress positively related to burnout in newly graduated nurses?
- 2.) Is perceived structural empowerment inversely related to burnout in newly graduated nurses?
- 3.) Will perceived structural empowerment moderate the relationship between a newly graduated nurse's role stress and burnout?

Definition of Terms

Burnout is theoretically defined as a physical, emotional and intellectual exhaustion syndrome manifested by an adverse attitude to professional life and other people, along with negative self-esteem, in which the individual experiences chronic fatigue and feelings of helplessness and hopelessness (Maslach & Jackson, 1981). The three dimensions of burnout are emotional exhaustion, depersonalization and decreased personal accomplishment. It is operationally defined as an individual score for each

dimension of the Maslach Burnout Inventory (Maslach & Jackson, 1996). Research indicates that the emotional exhaustion component is directly related to this chronic stress from one's job which leads to depersonalization and decreased personal accomplishment (Maslach et al., 2001; Maslach & Leiter, 1997; Leiter & Maslach, 1988). Theorists have described emotional exhaustion as the core component of burnout (Cox, Kuk & Leiter, 1993; Maslach & Leiter, 1997). The most widely used measure of burnout in the empirical literature is the emotional exhaustion subscale of the Maslach Burnout Inventory (MBI) (Aiken *et al.*, 2001; Flynn, Thomas-Hawkins, & Clarke, 2009; Laschinger, et al., 2009; Harwood, *et al.*, 2010; O'Brien, 2011). The emotional exhaustion subscale of the MBI will be used in this research study to measure burnout.

Role stress is theoretically defined as having three components; role ambiguity, role conflict and role overload (Kahn et al., 1964). This can be the result of an inconsistency between an individual's perception of the characteristics of a specific role and what the individual is actually doing in that role (Lambert & Lambert, 2001). Role overload will be operationally defined as the score on the Role Overload scale measured using the Individual Workload Perception Scale (Cox, Teasley, Lacey & Olney, 2010). Role ambiguity and role conflict will be operationally defined by a low score on the 6 item Role Ambiguity Scale and a high score on the 8 item Role Conflict Scale developed by Rizzo, House and Lirtzman (1970).

Empowerment is theoretically defined as having access to the power, either formal or informal, needed to accomplish a particular job. Kanter's theory (1993) stated that access to support, information, resources and opportunity for growth were the structures within organizations that fostered empowerment. Support refers to feedback

and guidance from others such as supervisors, and peers. Information refers to the technical knowledge needed to accomplish one's role as well as knowledge of the organization's goals and direction. Resources refer to the money, supplies and equipment necessary to accomplish one's work. Opportunity refers to the individual's prospects of growth and mobility within the organization (Kanter, 1993).

Empowerment will be operationally defined as the score on the Conditions of Work Effectiveness Questionnaire-II (Laschinger, Shamian, Finegan & Wilk, 2001).

Researchers have used a variety of definitions for newly graduated nurses. Some have defined this population as those working for one year (Casey et al., 2004) eighteen months (Kovner, et al., 2007; Duchscher, 2008); two years (Cho et al., 2006; Beecroft, Dorey & Wenten, 2008; Berkow, Virkstis, Stewart & Conway, 2008; Laschinger et al., 2009) and three years (Rudman & Gustavsson, 2011). Based on the empirical literature, newly graduated nurses in this study will be defined as nurses who have completed their undergraduate training and are currently employed as a registered professional nurse in an acute care facility for two years or less. In this role, they have been responsible for the following aspects of direct patient care which would have included the following: assessment, patient teaching, interaction with members of the interdisciplinary team, administration of medications, admission, discharge and transfer of patients as well as the organization and/or prioritization of care (Casey et al., 2004; Godinez, Schweiger, Gruver & Ryan, 1999; Marcum & West, 2004).

Delimitations

Studies indicate that nurses working in acute care facilities are experiencing high levels of burnout (Aiken et al; 2001; Aiken et al., 2002); however, none of these studies

focused exclusively on new graduate nurses in the United States. This study will be delimited to newly graduated nurses working in acute care facilities with two years of experience or less, who are involved in direct patient care.

Significance of the Study

Burnout has been theorized as occurring within the first few years of beginning one's career (Cherniss, 1980, 1989). Support for this hypothesized relationship in newly graduated nurses has been demonstrated in research conducted by Cho et al. (2006) and Rudman and Gustavsson (2011). Recognition of the relationship between burnout, role stress and empowerment is important since it impacts the retention of nurses, especially the newly graduated nurse (Lee et al., 2003). The cost of replacing a newly graduated nurse has a financial impact on the organization which has been calculated as high as \$64,000 (Jones, 2008). Halfer (2007) described the cost of turnover of a nurse to the organization as equal to the nurse's annual salary due to hiring and orientation costs.

Burnout can result in nurses distancing themselves from their patients both physically and emotionally. This distancing can lead to decreased job performance (Demir et al., 2003; Maslach et al., 2001) and adverse patient events (Aiken et al., 2002). High levels of burnout have been correlated with decreased job satisfaction and a nurse's intent to leave (Aiken et al., 2002; Janssen, de Jonge & Bakker, 1999).

Newly graduated nurses encounter an environment that has increased workloads, high job dissatisfaction, poor retention and high levels of burnout (Aiken et al., 2001; Aiken et al., 2002; Poghosyan, Clarke, Finlayson & Aiken, 2010; Garrosa, et al., 2011; Aiken et al., 2011; Kanai-Pak et al., 2008). The association of burnout with

retention of nurses and its negative impact on patient care, as well as the profession, supports the significance of this study.

Conclusion

Empowerment has an inverse relationship with burnout whereas role stress has a positive correlation with burnout. In view of the negative effects of burnout on the individual, the organization and the patient, measures to improve the nurses' working environment must be explored to prevent these negative consequences. Access to empowering work conditions can be viewed as a means of allowing nurses the ability to practice in an environment that promotes professional nursing practice and improves the effectiveness of the organization. Organizational structures can empower nurses, minimize role stress and decrease or alleviate the development of burnout which will allow nurses to attain meaningful accomplishment from their work while providing optimal patient care.

Chapter II. Review of the Literature

This research will examine the relationships of role stress, structural empowerment and burnout in new graduate nurses working in acute care hospitals. Both theoretical and empirical literature will be discussed. The theoretical literature that relates to the dependent variable, burnout will be discussed, followed by a theoretical discussion of the independent variable, role stress. The empirical literature that supports the relationship between role stress and burnout will be presented and then the theoretical literature that relates to the independent variable empowerment, as well as the empirical support for the relationship between empowerment and burnout.

Theories of Burnout

Various theorists have discussed the concept of burnout, which has been the focus of research since 1974. Initially of interest only to those in the human services professions, burnout gradually became recognized as a concept relevant to the industrial/organizational psychology sector as well. With this expanded area of interest, numerous research studies were conducted that contributed to the groundwork of the original researchers. This section will discuss the various theories that define this concept.

Freudenberger (1974) introduced the concept of burnout describing it as a process that occurs in professions that work with people who require assistance with problems which may be physical, psychological or social. Initially the research on burnout was conducted using interviews, case studies and observations of individuals. Freudenberger (1974) described burnout as a process that occurs in a person who is overextended in their job which eventually results in emotional depletion as well as a

lack of motivation. Adopting a term used in the 1970's to describe the consequences of chronic drug abuse; Freudenberger first used the term burnout to describe the symptoms of emotional exhaustion demonstrated by mental health care professionals, which developed from the emotional depletion of working intimately with people and assisting them with their emotional, social and physical problems (Freudenberger, 1974).

Maslach (1976), a social psychologist, began her research on burnout with an interest in what happens to people once they have developed emotional depletion. Maslach (1976) focused her research on care providers in health and human service professions such as physicians, psychiatrists, child care workers, social workers, and psychiatric nurses. Maslach further defined the components of the burnout as a multidimensional syndrome consisting of emotional exhaustion, depersonalization and reduced personal accomplishment which occurred in response to the chronic stress experienced by health care providers and human service workers (Maslach & Jackson, 1981). Maslach and Jackson (1986) developed a 22 - item instrument with three subscales entitled the Maslach Burnout Inventory to measure the three dimensions of burnout. Each dimension of burnout is measured with its corresponding scale and scored separately; the scores are not combined into one single measure of burnout (Maslach & Jackson, 1986). Additional research supported that emotional exhaustion developed from depletion of emotional resources which occurred as a consequence of chronic stress from work overload and personal conflict at the care provider's job (Maslach & Goldberg, 1998). Depersonalization referred to the health care provider's negative feelings or detachment from the clients. Initially, this dimension developed in response to emotional exhaustion as a shield to protect healthcare providers and allow them to

continue working in a stressful environment; however it often evolved into viewing clients as objects, not people. Reduced personal accomplishment was described as the negative perception of oneself that developed due to cynicism towards clients, decreased perception of competence in one's work and a decreased sense of productivity (Maslach & Goldberg, 1998).

Cherniss (1980) posited that burnout was a three stage transactional process that occurred over time among human service professionals in response to a stressful work situation. The first stage developed due to a disparity between resources and demands which results in job stress. In response to this stressful environment, the second stage developed causing a previously dedicated worker to become emotionally exhausted. In the third stage, a person becomes detached from the job resulting in a lack of concern for the client who was the recipient of care. This detachment from the client developed as a defensive coping mechanism allowing the person to decrease stress. Eventually, this detachment from the client caused a sense of discouragement within the worker which led to a lack of personal accomplishment. His research was based on grounded theory and also focused on the prevalence of early career burnout in new graduates linking its development to professional self-efficacy or the desire to achieve competence in one's professional role.

According to Cherniss (1980) burnout developed not only from the individual's response to a stressful work environment but was impacted by the organizational design which included the role structure and power structure within an organization. Using the role theory of Kahn et al. (1964), role structure referred to the role stress components of role ambiguity, role conflict and role overload. Role ambiguity developed when a

person was not sure what was expected of them within a specific role. Role conflict referred to demands being made on a person that are incompatible and role overload referred to a worker having too much to do without the appropriate resources. Cherniss (1980) discussed that all three role stress variables were prevalent among the human service professions and impediments to accomplishing the demands of a particular role. Cherniss (1980) postulated that power structures in an organization impacted autonomous and collective decision making which allowed a worker to exercise some power and control over their work and decrease the development of burnout.

With the development of a widely accepted definition for burnout, its posited relationship with the role stress variables and organizational design and a valid reliable measurement tool, the Maslach Burnout Inventory (MBI), the research on burnout further expanded into the organizational aspect of the work environment. Burnout theories evolved to include the interpersonal aspects of a person's role not only with clients, but also with co-workers, which was identified as an important source of stress (Leiter & Maslach, 1988). These authors suggested that emotional exhaustion would be positively related to negative interpersonal contacts. Leiter and Maslach (1988) posited that burnout can also result from a conflict within the individual caused by adherence to institutional policies that conflict with personal values and the professional role expectations within an organization. Their research also supported the theory that burnout was a sequential developmental process beginning with emotional exhaustion in individuals overwhelmed by the demands of their role. Depersonalization of clients developed as a coping mechanism which allowed the worker to develop a detached

response or distancing from the client. This distancing resulted in a decreased relationship with the client which caused a reduced sense of personal accomplishment.

Maslach and Leiter (1997) continued to expand their research on burnout and wrote about the theory of job- person mismatch. The authors used this theoretical framework to integrate both individual and organizational factors when discussing burnout identifying six specific aspects of the work environment in which mismatch can occur. These were identified as work overload, lack of control, insufficient reward, breakdown of community, absence of fairness and value conflict. Chronic mismatches in some or all of these aspects of the work environment were identified as antecedents to burnout. Maslach and Leiter (1997) posited that the greater the match, between the person and the job, the more engaged a person was with the work environment. They defined the direct opposites of the burnout dimensions as positive feelings of engagement which are energy, involvement and efficacy. Once a sense of engagement began to deteriorate, the negative corresponding burnout dimensions developed. Therefore, energy developed into emotional exhaustion, involvement developed into depersonalization and efficacy developed into a decreased sense of personal accomplishment. Realizing the importance of not only identifying but preventing burnout, Maslach and Leiter (1997) developed a complementary tool to the MBI entitled the Staff Survey. These two tools can be used by organizations to identify employee perceptions of six areas of the work environment, rate the employee's level of burnout or engagement on a continuum and implement organizational changes, if needed, to prevent burnout and promote engagement within the work environment.

In summary, burnout is a multi-dimensional syndrome with three components, emotional exhaustion, depersonalization and decreased personal accomplishment which develops over time in response to chronic stress at work (Maslach & Jackson, 1981). Burnout has been identified as occurring early in a person's career and has been related to developing competence within a specific role. Research indicates that the emotional exhaustion component is directly related to chronic stress from a job which leads to depersonalization and decreased personal accomplishment (Maslach, et al., 2001; Maslach & Leiter, 1997; Leiter & Maslach, 1988). Theorists have described emotional exhaustion as the core component of burnout (Cox et al., 1993; Maslach et al., 2001). The most widely used measure of burnout in the empirical literature is the emotional exhaustion subscale of the Maslach Burnout Inventory (MBI). This subscale has consistently high Cronbach's alpha coefficients of > 0.80 . The Cronbach's alpha coefficient for the emotional exhaustion subscale has been reported in the following studies; 0.91 (Aiken, Clarke, Sloane, Sochalski & Silber, 2002); 0.89 (Flynn et al., 2009); 0.91 (O'Brien, 2011); 0.90 (Harwood et al., 2010) and 0.91 (Laschinger, et al., 2009). Although participants were requested to respond to questions on all three subscales of the MBI, only the emotional exhaustion subscale will be used to measure burnout in this research study, based on the high Cronbach's alpha coefficients consistently reported for this subscale. Limited research has examined burnout in the new graduate nurse population (Cho et al., 2006; Laschinger et al., 2009; Rudman & Gustavson, 2011) and has been conducted only in Canada and Sweden. Since no research has been conducted in the United States on burnout in the new graduate nurse population, this study will examine burnout in this population.

Theories of Role Stress

Role stress has been conceptualized by various theorists (Kahn et al., 1964; Kramer, 1974; Hardy & Conway, 1988; Leiter & Maslach, 1988; Maslach et al., 2001). Kahn et al. (1964) identified the components of role stress as role ambiguity, role conflict and role overload.

Role ambiguity is defined as an individual not knowing what is expected within a certain role. In order to meet the expectations of a particular role, an individual must know the duties and responsibilities of that role and how best to accomplish them. Therefore, when the scope of responsibilities related to a role is either non-existent or inadequately communicated and / or an individual does not know how to accomplish these responsibilities, role ambiguity can develop.

Role conflict is defined as two or more sets of pressures occurring at the same time, in which compliance with one of these pressures does not allow compliance with the other (Kahn, et al., 1964). The intensity of the role conflict depends on the strength of the pressures. Kahn et al. (1964) identified four types of role conflict, intra-sender, inter-sender, inter-role, and person-role conflict. Intra-sender occurs when an individual receives two incompatible messages from the same sender. Inter-sender occurs when a person receives two messages from different senders related to role demands that are conflicting. Usually the individual cannot fulfill one demand without violating the other. Inter-role conflict occurs when a person is expected to assume various roles in an organization which require different behaviors or may even be incompatible with each other. The fourth type of role conflict, person-role conflict, develops when a person has to engage in behavior that is not compatible with their abilities or values. This type of

role conflict can also develop when a person lacks the required knowledge or competence to accomplish a particular role.

Role overload develops when an individual is unable to complete the requirements of a particular role within a specific timeframe. When time and resources are not adequate, an individual experiences excessive demands which result in high work pressures. High work pressures result in role overload. Too many demands that cannot be fulfilled by the individual create exhaustion, especially when this occurs on a continuous basis. In addition, work-time pressure forces a person to choose which pressures to comply with and which to postpone or evade (Kahn et al., 1964).

Kramer (1974) in her work with new graduate nurses discussed the theory of reality shock which occurred due to role stress associated with role ambiguity, role conflict and role overload. Kramer (1974) discussed role ambiguity in new graduate nurses emerged from the uncertainty that exists in actual clinical practice as compared to the structured undergraduate clinical experience. In the undergraduate environment, patient assignments were carefully selected to match learning objectives which adhered to precise step by step procedures. A new graduate nurse encounters numerous, complex, unique situations that require immediate application of knowledge, prioritization, and delegation. Kramer (1974) discussed role ambiguity in new graduate nurses emerged from the uncertainty that exists in actual clinical practice as compared to the structured undergraduate clinical experience. Role conflict developed from a discrepancy between the new graduate's conception of the various bureaucratic, professional and service roles that nurses assume with what they actually experienced (Corwin, 1961). Bureaucratic role conceptions are related to the organizational

structures such as the policies of the institution, and the value placed on one's adherence to these policies. Professional role conceptions are associated with the importance of upholding the values of the profession, advocating for the patient, and participating in professional organizations. Service role conceptions refer to the nurse's compassion and commitment to maintain the patient as the main focus of activity (Corwin, 1961).

Kramer (1974) further identified role conflict as another term for role discrepancy. Role conflict for this population refers to the conflict between the values that the new graduate developed during their undergraduate program with those recognized in the actual working environment (Kramer, 1974). New graduate nurses who were able to successfully merge the bureaucratic and professional roles of their actual working environment were able to resolve their role conflict and successfully transition into their new role. Conversely, those unable to accomplish this merger had a greater likelihood of leaving the profession. The new graduate nurse often recognizes that the demands of the new role are not congruent with what was valued in the undergraduate setting (Kramer, 1974).

Role overload occurred due to excessive demands on the new graduate nurse that could not be met within a specific timeframe. New graduate nurses had previously cared for one to two patients under the guidance of an instructor. Upon graduation, the new graduate nurse was expected to provide complete care for a large group of patients, often without adequate resources (Kramer, 1974).

Expanding on the work of Kahn et al. (1964), Hardy and Conway (1988) examined role stress among health care professionals and the impact of the health care organization on the individual. These theorists posited that role stress occurs when a

social structure, which is external to the individual, creates difficult, conflicting or impossible demands on that individual. Role ambiguity develops when expectations for a particular role are vague or when an individual does not have adequate information about how to perform within a specific role and does not know where to find this information (Hardy & Conway, 1988). Role conflict develops when existing role expectations are interpreted by an individual as conflicting or contradictory. Hardy and Conway (1988) defined role overload as an excessive workload that cannot be accomplished within an allocated time frame, not the inability to actually perform the responsibilities of the role.

Throughout her research on burnout, Maslach examined two components of role stress as antecedents to burnout; role overload and role conflict. Maslach and Leiter (1997) theorized that a work environment that is very intense with high demands and limited resources contributed to role overload and discussed the necessity for balance between productivity and the individual's available time and energy in order to prevent burnout. Maslach and Goldberg (1998) discussed role overload as occurring when a person's job requirements surpass human capability. When excessive workload is chronic and a person constantly has too much to do, in too little time with limited resources, burnout develops. Maslach, et al. (2001) further theorized about role overload describing it as excessive workload occurring from a mismatch between the individual and the work environment. They described role overload as too many demands on an individual within a specified amount of time. Leiter and Maslach (1988) postulated that role conflict, which developed from negative interpersonal experiences within the organization, was an antecedent to burnout. They identified role conflict as

developing from either disagreements among workers about how to accomplish a particular aspect of a job or from organizational structures, such as policies, which conflict with the personal values of the worker.

In summary, the theoretical literature supports the three components of role stress as role ambiguity, role conflict and role overload (Kahn et al.1964; Kramer, 1974; Hardy & Conway, 1988). Role ambiguity develops from lack of clarity about a particular role and uncertainty about what measures are necessary to accomplish the requirements of the role. Role conflict develops when existing role expectations are interpreted by an individual as conflicting or contradictory. Role overload results from excessive workload which occurs when a person's time and resources are insufficient to meet the responsibilities of a particular role. Although role stress has been identified as occurring in nurses (Chang et al., 2005; Garrosa et al., 2011; Riahi, 2011), only one study has examined role stress in the new graduate nurse population and that was done in Australia (Chang & Hancock, 2003). This research will examine role stress because it has not been studied in new graduate nurses in the United States.

Role Stress and Burnout: Empirical Support

In a meta-analytic review of role stress and its consequences, Orqvist and Wincent (2006) reviewed 300 journal articles that included some or all of the dimensions of role stress, allowing the construct of role overload to be used interchangeably with workload. In these studies the MBI was used to measure burnout. Role conflict and role ambiguity were frequently measured with the scale by Rizzo et al. (1970) and various instruments were used to measure role overload. The author's found positive relationships between the three dimensions of role stress (role overload, role

ambiguity and role conflict) and emotional exhaustion, the sub-scale used most frequently in the literature to measure burnout. The populations in these studies consisted of health care professionals (nurses, physicians, social workers, and psychologists), managers, child health specialists, correction officers and employees from non-service occupations. In their analysis, nine studies with a total sample population of 1,752 participants examined the relationship between role ambiguity and emotional exhaustion. Eight studies, with a total of 1,931 participants, examined the relationship between role conflict and emotional exhaustion, while five studies, which included 1,196 respondents, examined the relationship between role overload and emotional exhaustion. Significant and positive relationships were identified between emotional exhaustion and role overload, role ambiguity, and role conflict with varying effect sizes. Using Cohen's (1988) effect size rule, role conflict ($r=.12$) and role ambiguity ($r=.27$) had small effect sizes, while role overload ($r=.46$) had a medium effect size in relation to emotional exhaustion. The results identified the following relationships of the role stress variables with emotional exhaustion, role overload had the strongest influence ($.41 < r < .51$), role ambiguity had a moderate influence ($.22 < r < .31$) and role conflict had the weakest influence ($.07 < r < .16$).

Seven studies examined role conflict ($N = 1,827$) and role ambiguity ($N = 1,495$) in relation to depersonalization and five studies focused on role overload ($N = 1,196$) and depersonalization. Role ambiguity ($r= .22$) and role overload ($r= .18$) had a significant small effect size in relation to depersonalization, and the relationship between role conflict and depersonalization was insignificant ($r= .00$). The analysis revealed a

positive relationship in all of the studies that examined role ambiguity ($.17 < r < .27$) and role overload ($.13 < r < .24$) with depersonalization. Seven studies examined role ambiguity ($N = 1,495$) and role conflict ($N = 1,827$) in relation to personal accomplishment.

Five studies ($N = 1,196$) examined the relationship between role overload and personal accomplishment. The results indicated that in relation to personal accomplishment, role ambiguity ($-.36 < r < .23$) had a small or medium effect size. The relationships between role conflict ($-.27 < r < .31$) and role overload ($-.10 < r < .09$) and personal accomplishment were weaker. A significant and small effect size was found only between one of the role stress variables, role ambiguity ($r = -.17$), and personal accomplishment. The other two variables role conflict ($r = .04$) and role overload ($r = -.03$) were not significant.

In a longitudinal study, Peiro et al. (2001) examined all three components of role stress and their relationship with the three dimensions of burnout at two points in time. Their sample ($n = 302$, time 1) and ($n = 145$, time 2) was comprised of various health professionals including physicians, nurses, social workers, psychologists and other personnel. The instrument used to measure role conflict and role ambiguity was the Role Conflict and Role Ambiguity Scale by Rizzo, House and Lirtzman (1970). The Role Conflict Scale consisted of eight items and the Role Ambiguity Scale consisted of six items. Both are measured on a 5-point Likert scale that ranges from 1 = strongly disagree to 5 = strongly agree. Scores on each scale are equated with the corresponding variable. Rizzo et al. (1970) reported a Cronbach's alpha reliability coefficient for the Role Conflict Scale of .84 and for the Role Ambiguity Scale .82. Peiro et al. (2001)

reported a Cronbach's alpha for the Role Conflict Scale of .80 in the initial study and .83 a year later and for the Role Ambiguity Scale, .79 in the initial study and .78 a year later. Role overload was measured using a three item subscale from the Michigan Role Overload Organizational Assessment Questionnaire (MOAQ) (Camman, Fichman, Jenkins, & Klesh, 1979) with responses ranging from 1 = strongly disagree to 5 = strongly agree. The Cronbach's alpha coefficient for the MOAQ was 0.87 initially and 0.89 a year later.

Peiro et al. (2001) measured burnout using the MBI which is a 22 item instrument that has 3 subscales; emotional exhaustion, depersonalization and personal accomplishment. Responses to each item range from 0 to 6. The emotional exhaustion subscale has 9 items, with possible scores ranging from 0 to 54. Scores above 27 are indicative of burnout (Maslach & Jackson, 1981). The depersonalization subscale has 5 items, scores above 13 are indicative of high levels of depersonalization. The personal accomplishment subscale has 8 items, scores less than 31 are indicative of a lack of personal accomplishment and a high degree of burnout. All three sub-scales of the MBI were used to measure burnout in this study. Maslach and Jackson (1981) reported initial Cronbach's alpha coefficients for these subscales of .89 for emotional exhaustion, .77 for depersonalization and .74 for personal accomplishment. The Cronbach's alpha coefficients reported in the beginning of this study and one year later were: emotional exhaustion 0.82, 0.80; depersonalization 0.75, 0.81 and personal accomplishment 0.82, 0.82. The initial results revealed significant positive correlations between emotional exhaustion and role ambiguity ($r = .37, p < .001$), role conflict ($r = .45, p < .001$) and role overload ($r = .57, p < .001$). These three variables remained positively correlated

with emotional exhaustion a year later; role ambiguity ($r=.20, p<.001$), role conflict ($r=.31, p<.001$) and role overload ($r=.48, p<.001$). There were also positive correlations between depersonalization and role ambiguity ($r= .10, p >.05$), role conflict ($r=.22, p <0.05$), and role overload ($r=0.32, p < .001$) initially, with only role conflict and role overload having statistically significant correlations. These three variables remained positively correlated with depersonalization a year later as well; role ambiguity ($r= .08, p>0.05$), role conflict ($r= 0.24, p <0.001$) and role overload, ($r=0.28, p < 0.001$). Personal accomplishment was negatively correlated with each of the role stress variables, with a significant correlation noted between personal accomplishment and role ambiguity in the initial research ($r= -.36, p < .001$). The results of this particular study add to the empirical support for the relationship between the variables of role stress and burnout by examining relationships over time.

One study, conducted on a sample of nurses in Belgium, examined the impact of work stressors which included role conflict and role ambiguity and the leadership style of the participant's nurse manager on the levels of emotional exhaustion among 625 staff nurses (Stordeur, D'hoore & Vandenberghe, 2001). Relevant to this research project are the relationships between role ambiguity, role conflict and emotional exhaustion. The authors discussed the origin of stressors as arising from within the organizational structure and the influential relationship between these stressors and the development of emotional exhaustion. Role ambiguity and role conflict were measured using only three items from each of the original scales developed by Rizzo et al. (1970). Cronbach's alpha coefficient for the Role Ambiguity Scale was 0.82 and for the Role Conflict Scale was 0.95. Emotional exhaustion was measured using the sub-scale from the MBI.

The Cronbach's alpha coefficient was 0.87. Using correlational analysis, a significant association was found between role ambiguity and emotional exhaustion ($r = 0.35$, $p < 0.001$), which supported the relationship between lack of clarity about job requirements and its effect on the development of burnout. Role conflict in this study was found to be unrelated to emotional exhaustion ($r = -0.07$, $p > 0.05$). This result differed from those reported in previous studies examining role conflict and emotional exhaustion by Ortqvist and Wincent (2006). The insignificant relationship obtained between role conflict and emotional exhaustion in this analysis may have resulted from the use of only three items from the original eight item role conflict scale and the use of a 4-point Likert scale instead of the 7-point scale originally designed by Rizzo et al. (1970). In addition, this study was conducted in Belgium and role conflict may not be a significant problem in the healthcare environment in this culture or in this particular sample of nurses.

Leiter and Maslach (1988) conducted a research study which explored the impact of interpersonal environment on burnout and organizational commitment in a mixed sample of nurses and support staff ($n = 52$). The authors examined role conflict using the eight item Role Conflict Scale developed by Rizzo, et al. (1970) and measured burnout using the three sub-scales of the MBI. In this study, the Cronbach's alpha coefficient for the Role Conflict scale as 0.76 and for the three subscales of the MBI-HSS, 0.91 for emotional exhaustion, 0.63 for depersonalization and 0.73 for personal accomplishment. The results of this study revealed that emotional exhaustion was positively related to role conflict ($r = 0.65$, $p < 0.05$) which is indicative of a work environment with negative interpersonal relationships. There was also a positive

relationship between role conflict and depersonalization ($r=0.26$) and a negative relationship between role conflict and personal accomplishment ($r=-0.11$).

Kim and Stoner (2008) conducted a study to examine the relationship between role stress, job autonomy, social support, burnout and intent to leave among a sample of 346 social workers. Social workers, like nurses have demanding jobs, heavy workloads, and experience role stress which is associated with burnout in this profession (Soderfeldt, Soderfeldt & Warg, 1995). Role conflict and role ambiguity were measured using the Role Conflict and Role Ambiguity Questionnaire devised by Rizzo, et al. (1970). Cronbach's alpha coefficient for the Role Conflict Scale was 0.88 and 0.84 for the Role Ambiguity Scale. A five - item work overload scale, developed for use in human service workers was used to measure role overload (Caplan, Cobb & French, 1975). This tool measured each item on a seven-point Likert scale with responses ranging from 1 = strongly disagree to 7 = strongly agree. Cronbach's alpha in this study was 0.82. Burnout was measured using all three sub-scales of the MBI -HSS. Cronbach's alpha coefficient for emotional exhaustion was 0.91, depersonalization 0.75 and 0.79 for personal accomplishment. Results of this study supported the relationship between role stress and emotional exhaustion ($r = 0.64, p < 0.05$), depersonalization ($r=0.40, p < 0.05$) and personal accomplishment ($r= -0.22, p < 0.05$); indicating that a social worker with high levels of role stress also had high levels of burnout. The researcher performed a series of confirmatory factor analysis (CFA) and the results of the CFA analysis supported the presence of a common underlying construct of role stress that explained role ambiguity, role conflict and role overload. Therefore, the author measured role stress by summing up all responses for items of role ambiguity,

role conflict and role overload scales to obtain a single indicator or one score for role stress (personal communication, Kim, H. 2/21/2010).

Lee and Ashforth (1996) conducted a meta-analytic review of the correlates of the three dimensions of burnout using the emotional exhaustion scale of the MBI and the role stress dimensions of role overload, role conflict and role ambiguity. The authors analyzed 61 studies, with sample sizes ranging from 34 to 906 ($M = 198.07$; $SD = 172.08$). Eighty percent of participants in these studies were teachers, nurses, counselors, police officers and social workers while the other twenty percent were supervisors and managers of these types of human service workers. The analysis indicated that all three role stress dimensions were positively meta-correlated with emotional exhaustion;

role ambiguity ($r = .21$, $p < .001$), role conflict ($r = .53$, $p < .001$) and role overload ($r = .65$, $p < .001$). Depersonalization was positively meta-correlated with role ambiguity ($r = .34$, $p < .001$), role conflict ($r = .37$, $p < .001$) and role overload ($r = .34$, $p < .001$). Role ambiguity had a positive meta-correlation with personal accomplishment ($r = .11$, $p < .001$) while role conflict and role overload had a negative meta-correlation ($r = -.21$, $p < .001$; $r = -.09$, $p < .001$). The strongest correlations were between role conflict and role overload with emotional exhaustion.

A study conducted by Acker (2003) used a sample of 259 mental health service workers, who had experienced changes in their roles due to the expansion of managed care, and examined the relationships between role conflict, role ambiguity and burnout. Due to changes in the health care system it was identified that some mental health service workers viewed their work environment as incongruent with their education and

professional values and were at risk to experience role stress (Acker, 1999). A hypothesis tested in this study was that workers who experienced role conflict and role ambiguity would have high levels of burnout. Role ambiguity and role conflict were measured by the scales constructed by Rizzo, et al. (1970) and burnout was measured using the three sub-scales of the MBI by Maslach and Jackson (1986). Cronbach's alpha coefficients for this study were not reported. The results of the study showed significant positive correlations between emotional exhaustion and role conflict ($r=.33$, $p < .01$), role ambiguity ($r= .21$, $p < .01$) and depersonalization and role conflict ($r = .29$, $p < .01$), role ambiguity ($r= .17$, $p < .01$). There was a non-significant positive relationship between personal accomplishment and role conflict ($r = .08$, $p > 0.05$) and a significant negative relationship with role ambiguity ($r= - .17$, $p < .01$). These results indicated a strong correlation between role ambiguity, role conflict and emotional exhaustion.

In summary, role ambiguity, role conflict and role overload have all been positively correlated with either one dimension of burnout (emotional exhaustion) or all three dimensions (Ortqvist & Wincent, 2006; Peiro et al. (2001). This theoretical relationship was supported in a meta-analysis of 300 journal articles which included nurses, physicians, social workers, managers and non-service occupations (Ortqvist & Wincent, 2006). All of these studies used the MBI to measure burnout, the Role Conflict and Role Ambiguity Scale by Rizzo, et al. (1970) to measure role conflict and role ambiguity, and various instruments to measure role overload. All three role stress variables had significant positive correlations with emotional exhaustion. Role ambiguity and role conflict had small effect sizes, with role overload having a medium

effect size and the strongest influence (Ortqvist & Wincent, 2006). In a longitudinal study, Peiro et al. (2001), found all three role stress variables had significant positive correlations with emotional exhaustion, initially and one year later. Role conflict and role overload had significant correlations with depersonalization and the only role stress variable to have a significant correlation with personal accomplishment was role ambiguity. The results of the meta-analysis of Ortqvist and Wincent (2006), Lee and Ashforth (1996) and the other empirical studies examining burnout demonstrated that predictor variables had unique relationships with each dimension of burnout. The empirical literature supports examining the three role stress variables and emotional exhaustion due to the relationships and effect sizes correlated with this subscale of the MBI. This research study will examine the relationship between the role stress variables and the emotional exhaustion subscale of the MBI in the new graduate nurse population working in acute care facilities since no research has been conducted that examines this theoretical relationship in this population.

Theory of Structural Empowerment

Rosabeth Kanter's structural theory of organizational behavior (1993) explains the concept of empowerment in the workplace. Kanter's theory was formed based on her observations in the business world where she conducted a large qualitative study of the work environments in a large corporation. In her theory, Kanter (1993) defined power not as force or domination but rather as the "ability to get things done, to mobilize resources, to get and use whatever it is that a person needs for the goals he or she is attempting to meet" (Kanter, 1993, p. 166). The structure within an organization strongly influences the worker's perception of empowerment. Kanter's theory of

structural power in organizations (1993) proposes that individuals feel empowered when they perceive that their work environment provides access to support, information, resources and opportunity. Kanter (1993) referred to these aspects of the work environment as “power tools” which enable employees to accomplish their work in ways that are rewarding, meaningful and empowering.

According to Kanter (1993) support refers to feedback and guidance related to the responsibilities of a particular job and decision making from others such as supervisors, and peers. Information refers to the technical knowledge needed to accomplish a particular role, as well as knowledge of the organization’s goals. Resources refer to the money, supplies, time and equipment necessary to accomplish one’s work. Opportunity refers to the ability of the individual to learn and develop within the organization, increasing competence while being recognized and rewarded. Power also arises from formal and informal systems within an organization. When an employee’s role is visible within the organization, integral to its mission and flexible they have formal power. Informal power originates from positive associations with co-workers including peers, supervisors and ancillary personnel. These interpersonal relationships foster effective communication and collaboration which enhance the ability to accomplish work (Kanter, 1993). Empowering workplace environments influence the attitudes and behaviors of the employees. When the workplace lacks these empowering conditions, employees experience powerlessness. Powerlessness fosters burnout, whereas empowerment deters the development of burnout (Kanter & Brown, 1982).

Although Kanter’s theory originated in the business sector, Chandler (1991) was the first to apply Kanter’s theory to the nursing environment. Her research indicated

that staff nurses who did not have access to support, information, resources and opportunity were not empowered. Chandler's application of Kanter's theory to nursing has been continuously used as a model in nursing research studies involving staff nurses (Wilson & Laschinger, 1994; Sabiston & Laschinger, 1995; Hatcher & Laschinger, 1996; Laschinger, Finnegan, Shamian & Wilk, 2001; Laschinger & Finnegan, 2005). Research has also been conducted using this model for nurse educators (Sarmiento, Laschinger & Iwasiw, 2004); nursing management (Upenieks, 2003); student nurses (Bradbury-Jones, Sombuck & Irvine, 2007), nurses across cultures (Bradbury-Jones, Irvine & Sambrook, 2007) and new graduate nurses (Cho et al., 2006).

In summary, employees respond to and are affected by the environment in which they work (Maslach & Leiter, 1997). Workers are empowered when they perceive that their work environment provides access to support, information, resources and the opportunity to learn and advance within the organization (Kanter, 1993). Individuals who do not have access to resources, information, support and opportunity experience powerlessness (Kanter, 1993). Powerless individuals are more susceptible to burnout. Nurses who have high levels of empowerment report lower levels of burnout (Laschinger & Hatcher, 1996). Research conducted in Canada, has associated empowerment with low levels of burnout in a sample population of new graduate nurses (Cho et al., 2006; Laschinger et al., 2009).

Empowerment and Burnout: Empirical Support

Hatcher and Laschinger (1996) conducted one of the first studies to examine the relationship between staff nurses' perceptions of empowerment and their level of burnout using Kanter's theory. This descriptive correlation study tested the proposition

that staff nurses who perceived they had access to power and opportunity within their organization would have lower levels of burnout. The relationships between empowerment and all three aspects of burnout were tested. Burnout was measured using the three sub-scales of the MBI and empowerment was measured using a modified version of the Conditions of Work Effectiveness Questionnaire (CWEQ) developed by Kanter and adapted by Chandler (1991) for research that examines nurses and their work environments. The CWEQ consists of four subscales with a total of 41 items, each measured on a 5 point Likert scale. The subscales measure access to information, support, supplies and opportunity. The supplies subscale was modified by Hatcher and Laschinger (1996) due to its previous poor reliability. Hatcher and Laschinger (1996), along with a panel of content experts, developed a new supplies subscale with reliabilities ranging from .85 to .90 (Goddard, 1993; Wilson, 1993). Chandler (1986) established reliabilities for the other three subscales ranging from .76 to .88 with subsequent studies reporting reliabilities for these scales between .73 to .98 (Goddard, 1993; Wilson, 1993). Hatcher and Laschinger (1996) reported alpha reliabilities for the four CWEQ subscales ranging from .79 to .91. Alpha reliabilities for the three subscales of the MBI ranged from .65 to .87. The results of the study supported the hypothesis that among staff nurses, empowerment was negatively correlated with emotional exhaustion ($r = -.34, p = .004$) and depersonalization ($r = -.28, p = .02$) and positively correlated with personal accomplishment ($r = +.36, p = .002$).

Kanter's theory of empowerment was tested in a study of nurse educators in Canada which examined empowerment, burnout and job satisfaction (Sarmiento et al., 2004). This study used a descriptive correlation design to examine the relationships

among the variables in a sample of 89 full-time college nurse educators in community colleges in Canada. Nurse educators have multiple responsibilities in a time pressured environment which make them vulnerable to developing burnout. Empowerment was measured by the CWEQ (Laschinger, 1996) with reported subscale reliabilities ranging from .79 to .93 in this study. Burnout was measured using 3 sub-scales of the Maslach Burnout Inventory -Educator Survey (MBI- ES). The MBI-ES is a version of the original MBI, designed for use specifically among educators and modified by changing the wording in the instrument from recipient to student. Cronbach's alpha coefficients for the subscales in this study were .91 for emotional exhaustion, .74 for depersonalization and .71 for personal accomplishment. This study tested the hypothesis that college nurse educators' perceptions of empowerment would be negatively related to their levels of emotional exhaustion and depersonalization and positively related to their levels of personal accomplishment. The results supported this hypothesis, with significant relationships between the overall empowerment scores and each of the burnout sub-scales. There was a negative correlation between empowerment and emotional exhaustion ($r = -0.51, p = 0.01$) and empowerment and depersonalization ($r = -0.40, p = 0.01$), and a positive correlation between empowerment and personal accomplishment ($r = 0.38, p = 0.01$). These results support Kanter's theory that empowered employees experience lower levels of burnout.

Harwood, et al. (2010) conducted a study using a random sample of 129 nurses who were members of the Canadian Association of Nephrology Nurses. Respondents completed the Maslach Burnout Inventory – General Survey (MBI- GS) developed by Maslach, Jackson and Leiter (1997) for use in all occupations and the Conditions of

Work Effectiveness –II (CWEQ-II) (Laschinger, Sarmiento, Finegan & Wilk, 2001).

The MBI-GS is a 16-item tool with three subscales that measure emotional exhaustion, cynicism and professional efficacy on a 7 point Likert scale. The MBI-GS is scored by calculating an average score for each subscale. The 5 –item emotional exhaustion subscale was used to measure burnout in this study. An average score above three is indicative of burnout. The reliability coefficient for the emotional exhaustion subscale of the MBI –GS in this study was .90. The (CWEQ-II) has six subscales with a total of 19 items that describe the components of empowerment as initially identified by Kanter (1977). The six components of empowerment measured by the subscales are opportunity, information, support, resources, formal power and informal power. Each item is rated with a 5 point Likert scale ranging from 1 = none to 5 = a lot. Items on each of the subscales are added and then averaged to obtain a score for each subscale ranging from 1 to 5. The scores of the subscales are then added to obtain a total empowerment score which can range from 6-30. Higher scores indicate greater empowerment. In previous research, internal consistency for the CWEQ-II ranged from .88 (Knoll & Van Linge, 2008), .89 (Armellino, Griffin & Fitzpatrick, 2010) and 0.92 (O'Brien, 2011). The reliability coefficient for the CWEQ- II in this study was .90. Using Pearson's correlation analysis, the researchers identified that there was a negative association between burnout (using the emotional exhaustion subscale of the MBI) and empowerment ($r = -.276$, $p < 0.001$). This result supported their hypothesized relationship that nurses working in empowering environments had less burnout.

Another study using a sample of nephrology nurses was conducted in the United States by O'Brien (2011). This study examined the relationship between empowerment

and burnout in a sample of staff nurses (N=233) working in outpatient dialysis centers. Respondents in this sample completed the entire MBI (only the emotional exhaustion subscale was used) and the CWEQ –II. The Cronbach's alpha coefficient for the emotional exhaustion subscale was .91 and for the CWEQ –II, it was .92. The findings from this study indicated that structural empowerment was inversely related to burnout ($r = -0.445$, $p = 0.000$) supporting the hypothesized relationship of the author. High levels of burnout were reported by 33 % of the respondents and 27.5 % of the respondents reported moderate levels.

A study conducted by Cho et al. (2006) was the first to test Kanter's theory of structural empowerment in the new graduate nurse population ($n = 226$), defined as nurses with two years of experience or less. Their study explored the relationships among empowerment, six areas of work life, work engagement/burnout and organizational commitment. The authors used the term "engagement" which was described by Maslach and Leiter (1997) as the opposite concept of burnout when measured on a continuous scale. Maslach and Leiter (1997) used this term to discuss the mismatch that can occur between the employees' expectations versus what is actually experienced in the workplace. Once a mismatch occurs, a person who initially starts with engagement at work begins to move on the continuum from engagement to burnout. Laschinger and Finnegan (2005) found a relationship between a match or fit in six areas of work life and workplace conditions that were empowering.

The Conditions of Work Effectiveness Questionnaire II (CWEQ II) developed by Laschinger, Finnegan, Shamian and Wilk (2001) was used to measure empowerment. In this study, Cronbach's alpha reliability for this instrument was .87. The emotional

exhaustion scale, of the Maslach Burnout Inventory – General Survey (MBI – GS) (Schaufeli, Leiter, Maslach & Jackson, 1996), was used to measure burnout versus engagement on a continuum. This version of the original MBI was designed for use in all occupations, not just health care providers, to measure the respondents' perception of their work environment on a continuum from burnout to engagement. Using this subscale individuals rate how often they experience depletion of emotional energy ranging from 0 = never to 6 = every day. Cronbach's alpha reliability estimates for this subscale have been reported as 0.90 (Laschinger, Almost, Purdy & Kim, 2004) and in this study it was 0.91.

Moderate total structural empowerment scores were noted among the new graduate nurses (mean= 19.31; SD = 3.10) (Cho et al., 2006). Sixty-six percent of the respondents reported emotional exhaustion scores with a mean (3.42) and a SD (1.32). Scores greater than three indicate burnout (Maslach, 1996). The results of the path analysis and structural equation modeling indicated that there was a direct positive effect of structural empowerment on the overall score for the match between the person and the areas of work life ($\beta = .69$) which resulted in a negative effect on emotional exhaustion ($\beta = -.51$) (Cho et al., 2006). The results of this study indicated that new graduate nurses who felt empowered had a greater match with their areas of work life and lower levels of burnout thereby supporting the inverse relationship between empowerment and burnout.

In summary, there is empirical support for the theoretical relationship between empowerment and burnout among staff nurses (Hatcher & Spence-Laschinger, 1996; O'Brien, 2011) among a random sample of nurses (Harwood et al., 2010) among nurse

educators (Sarmiento et al., 2004) and among the population of new graduate nurses (Cho et al., 2006). The CWEQ or the CWEQ-II was used to obtain a total structural empowerment score. Burnout was measured using some version of the MBI. Three of the five studies used only the emotional exhaustion subscale of the MBI to measure burnout. The results from these studies emphasize the importance of developing work environments for nurses that are empowering, which allows them to accomplish their work and prevent the development of burnout. No research has been conducted in the United States that examines this relationship in the new graduate nurse population working in acute care facilities. This research study will examine this theoretical relationship.

Role Stress, Empowerment and Burnout: Empirical Support

The relationships between role stress, empowerment and burnout were explored in a study conducted in a sample of 178 Korean nurses using a cross sectional correlation design (Lee, et al., 2003). In this study the authors used the term “job stress” but defined it as role overload, role conflict, role ambiguity and perceived control. Job stress was measured with instruments for each of the sub-dimensions as described by the authors. Role overload was measured by the participants’ responses to the amount of work and the allotted time to complete their assignments using a tool developed by Beehr, Walsh and Taber (1976). Respondents were asked to respond to 3 items using a 5-point scale ranging from 1 = strongly disagree to 5 = strongly agree. The three statements were: “I am given enough time to do what is expected of me on my job” (reverse coded); “It often seems like I have too much work for one person to do” and “The performance standards on my job are too high.” High scores indicate role

overload. The original authors of this instrument reported internal consistency using Spearman-Brown prophecy formula of 0.56. In this study, the Cronbach's alpha was 0.50 and

test-retest reliability two weeks later was 0.83 using a sample of 20 nurses. Role ambiguity and role conflict were measured by the Role Ambiguity and Role Conflict Scale (Rizzo, et al., 1970). Cronbach's alpha for the Role Conflict Scale was 0.77 and for the Role Ambiguity Scale was .76. To measure perceptions of empowerment, nurses were asked to respond to a two item Global Empowerment Scale developed initially by Laschinger, et al. (2001) to measure construct validity of their CWEQ-II scale which measures the six components of structural empowerment. The two item Global Empowerment Scale measured the perception of nurses working in an organization with statements such as "Overall, my current work environment empowers me to accomplish my work in an effective manner" and "Overall, I consider my workplace to be an empowering environment." Respondents rated the items on a Likert scale ranging from 1= strongly disagree to 5 = strongly agree. The two items were summed and averaged to create a score ranging from 1 to 5. High scores are indicative of high perceptions of empowerment. Previous internal consistency reliability for this measure was .90 (Laschinger, et al., 2001).

Lee et al. (2003) also examined the relationship between all three role stress variables and their relationship to all three dimensions of burnout. For the subscale emotional exhaustion, there was a significant positive relationship between all three aspects of role stress, role ambiguity ($r= 0.21, p< 0.05$), role conflict ($r= 0.36, p<0.001$) and role overload ($r= 0.29, p <0.001$). These results are similar to those described in the

meta-analysis conducted by Ortqvist and Wincent (2006). For role ambiguity and emotional exhaustion ($n = 1,752$) in 9 studies, $r = 0.27$, $p < 0.01$; for role conflict and emotional exhaustion ($n = 1,931$) in 8 studies ($r = 0.12$, $p < 0.01$) and for role overload and emotional exhaustion ($n = 1,196$) in 5 studies ($r = 0.46$, $p < 0.01$).

A significant positive relationship was shown between the subscale depersonalization and two aspects of role stress, role ambiguity ($r = 0.29$, $p < 0.001$) and role conflict ($r = 0.25$, $p < 0.001$) and a non-significant relationship (a correlation below 0.13) with role overload ($r = 0.05$, $p > 0.05$). The meta-analysis by Ortqvist and Wincent (2006) found a similar relationship between depersonalization and role ambiguity in their analysis of 7 studies ($n = 1,495$) ($r = 0.22$, $p < 0.01$). However, their meta-analysis of 7 studies ($n = 1,827$) revealed a non-significant relationship between role conflict and depersonalization ($r = 0.00$, $p = 0.94$) and a positive relationship between role overload and depersonalization in 5 studies ($n = 1,196$) ($r = 0.18$, $p < 0.01$). Perhaps the different findings can be explained by cultural differences and sample size, since none of the samples in the meta-analysis of Ortqvist and Wincent (2006) were conducted using a population of Korean nurses and in the meta-analysis the sample size was much larger than the sample size ($n = 178$) in the study by Lee et al. (2003). In addition, the tool used to measure role overload in the study by Lee et al. (2003) is not widely used and might not have captured the essence of this construct.

There was a significant negative relationship between role ambiguity ($r = -0.47$, $p < 0.001$) and personal accomplishment and the three dimensions of role stress and a non-significant negative relationship between role conflict ($r = -0.11$, $p > 0.05$) and role overload ($r = -0.02$, $p > 0.05$). The results for role ambiguity and role overload are

supported in the meta-analysis of Ortqvist and Wincent (2006). Their analysis revealed that role ambiguity was negatively correlated with personal accomplishment in a sample of 7 studies ($n = 1,495$), ($r = -0.17$, $p < 0.01$), and role overload was negatively correlated with personal accomplishment in 5 studies with a sample of 1,196 ($r = -0.03$, $p = 0.32$). However, role conflict was positively correlated with personal accomplishment in their sample of 7 studies ($n = 1,827$), ($r = 0.04$, $p = 0.12$). The negative correlation obtained in the study by Lee et al. (2003) could be explained by a variance due to this study being conducted within the Korean culture where personal accomplishment may not be related to role conflict. Also, this study was conducted on a sample of only nurses whereas the meta-analysis included employees from various professions.

Further analysis of the data identified the relationship between empowerment and the three dimensions of burnout. There was a negative relationship between empowerment and emotional exhaustion ($r = -0.21$, $p < 0.05$) and depersonalization ($r = -0.03$, $p < 0.05$) and a positive relationship between empowerment and personal accomplishment ($r = 0.29$, $p < 0.001$). These results were supported in the previous research conducted by Hatcher and Laschinger (1996) which examined the relationship between structural empowerment and burnout. There are limitations to this study since it was conducted on a small sample of nurses in a homogeneous population. In addition, the researcher used the two item Global Empowerment Scale to measure empowerment instead of the CWEQ-II which measures all six components of structural empowerment. The significant correlations between empowerment, role stress and all three dimensions of burnout reported in this study provide empirical support for future research on this topic.

In summary, this study examined the relationships of role stress, empowerment and burnout in Korean nurses and the implications for potential changes to organizational structure and policies. Significant relationships between the role stress variables and burnout reported in this study were supported in the meta-analysis by Wincent and Ortqvist (2006). The relationship between empowerment and burnout was supported in the research by Hatcher and Laschinger (1996). All of the studies in the empirical literature found a positive correlation between all of the role stress variables and emotional exhaustion and a negative correlation between empowerment and the emotional exhaustion subscale of the MBI supporting the hypotheses being tested in this research study. The study by Lee et al. (2003) is the only research that has been conducted that provides empirical support for this relationship in any population. Seventy three percent of participants in this study were staff nurses and half of those were working for six years or less. This study was done on a homogeneous population and was not limited to new graduate nurses (Lee et al., 2003). The empirical literature review supports the importance of examining the three dimensions of role stress and empowerment as predictors of burnout and the need for further research on another population specific to this study, new graduate nurses in the United States.

Current state of the Knowledge

Burnout which occurs in a variety of professions has been identified within the nursing profession and role ambiguity, role conflict and role overload have been recognized as antecedents to developing burnout. Role stress has been identified in new graduates (Kramer, 1974; Kelly, 1998; Chang & Hancock, 2003). Current research continues to report correlations between role stress and burnout (Riahi, 2011; Garrosa et

al., 2011) which can lead to job dissatisfaction and nurses' intent to leave their current position (Janssen, et al., 1999; Shimizu, Feng & Nagata, 2005; Estryn-Behar, et al., 2007). Role stress has also been identified as having physical and psychological effects on nurses (McVicar, 2003). Research on this topic, is needed due to the high turnover rate of new graduate nurses in acute care facilities. In a study of new graduate nurses in Nevada (n = 352), Bowles and Candela (2005) reported a 30% turnover rate within their first year of employment and 57% after two years. Cho et al. (2006) reported that 66% of new graduate nurses (n = 226), in Canada, were experiencing burnout associated with a negative work environment.

Burnout, among nurses, has been associated with job dissatisfaction, departure from the profession, patient mortality and a negative impact on patient satisfaction scores and patient safety (Aiken et al., 2002). Research indicates that nurses working in environments that are empowering have lower levels of burnout (Hatcher & Laschinger, 1996; Laschinger, Finnegan, Shamian & Wilk, 2003; Sarmiento et al., 2004; Laschinger et al. 2009). The first study to examine empowerment in a population of only new graduate nurses was done in Canada by Cho et al. (2006). Subsequent studies in Canada have expanded the research to include the relationship of empowerment and burnout among sample populations of only new graduate nurses (Laschinger et al., 2009; Laschinger et al., 2010).

Only one study has examined the relationship of role stress, empowerment and burnout in a sample of nurses and this was conducted in Korea (Lee et al. 2003). Role stress variables explained 10-20% of the variance in the dimensions of burnout in comparison to individual characteristics which explained only 1-9% of the variance.

Although significant correlations existed between all three role stress variables and the three dimensions of burnout, the highest significant positive correlations were between all three role stress variables and emotional exhaustion. These correlations demonstrate the importance of examining areas of the nurses' work environment associated with role stress, such as; increased workload, clarity of job descriptions and conflicting role demands which have been identified as antecedents to the development of burnout.

The authors suggested repeating this study using a sample of nurses from various backgrounds and differing geographical areas to increase the generalizability of their results. Additional research is needed to fill the gap in the literature by examining role stress, empowerment and burnout in the new graduate population from various ethnic backgrounds, geographical areas, and types of hospitals. Research identifying the relationship of role stress, burnout, and empowerment in new graduate nurses will provide important data about the new graduate nurse's experience in acute care facilities which has not yet been examined in the United States.

Moderation Model Empirical Support

Hochwalder (2007) conducted a study to examine the main effect of empowerment on burnout, mediating and moderating effects of empowerment between the psychosocial work environment and burnout. This study was conducted on a sample of registered nurses and nursing assistants ($n = 908$). The instrument used to measure the psychosocial work environment was a scale developed by Karasek and Theorell (1990) that measured three aspects of the work environment: demand, control and social support. Cronbach's alpha coefficients for these scales in this study were .71, .52 and .83. Empowerment was measured using Spreitzer's Psychological Empowerment Scale

(1995) which measures four aspects of the work environment such as meaning, competence, self-determination and impact. The Cronbach's alpha coefficient for this scale was .86. Burnout was measured with the MBI. Cronbach's alpha coefficient for the emotional exhaustion subscale was .90, depersonalization .71 and personal accomplishment .78. The results of this study indicated only one significant moderator effect of empowerment and that was on the association between demand and burnout ($\beta = -0.08$, $p < 0.01$) accounting for 1 % of the variance. An increase in demands was associated with lower levels of burnout among nurses with high empowerment scores compared to those with low empowerment scores. In their meta-analysis discussion Ortqvist and Wincent (2006) discussed the importance of future research focusing on potential moderators for the relationships between the role stress variables and some of their consequences, such as burnout. Additional research expanded the knowledge on this subject by testing the hypothesis that structural empowerment moderates the relationship between role stress and burnout in new graduate nurses. There were no studies that have tested this moderation model in any population.

Theoretical Rationale

Burnout has been identified as a multidimensional syndrome consisting of emotional exhaustion, depersonalization and decreased personal accomplishment (Maslach and Jackson, 1981). The emotional exhaustion component developed from being emotionally overextended and exhausted as a consequence of the work environment. Depersonalization referred to the health care provider's negative feelings or detachment from the clients that are the recipients of care, viewing them as objects, not people. Reduced personal accomplishment was described as the negative perception

that developed due to a decreased feeling of competence and achievement in one's work (Maslach & Goldberg, 1998).

Role conflict, role ambiguity and role overload have been identified as the three components of role stress (Kahn et al, 1964; Hardy & Conway, 1988). Role ambiguity has been defined as an individual not knowing what is expected of them within a certain role. Role conflict has been defined as a mismatch between the expectations of a role and what an individual experienced. Role overload has been defined as inadequate time and resources available to fulfill the requirements of a particular role. Theorists have proposed that burnout develops in response to certain conditions present within the work environment, such as role stress (Leiter, & Maslach, 1988; Maslach, Schaufeli & Leiter, 2001). Role stress and burnout are prevalent among nurses and is supported by both the theoretical and empirical literature (Gil-Monte et al., 1993; Change & Hancock, 2003; Chang et al., 2005).

Kanter (1993) postulated that empowerment is present in an organization that provides information, support, resources and opportunity. Laschinger (1996) theorized that an inverse relationship existed between empowerment and burnout in the nursing population. Subsequent research studies have supported this inverse relationship (Sarmiento et al., 2004; Laschinger et al., 2009; Harwood et al., 2010). Only one article in the empirical literature has examined the relationship between role stress, empowerment and burnout and it was conducted using a population of nurses in Korea (Lee et al., 2003). In this study, empowerment had a significant inverse relationship with burnout.

Figure 1. Conceptual Framework for Burnout

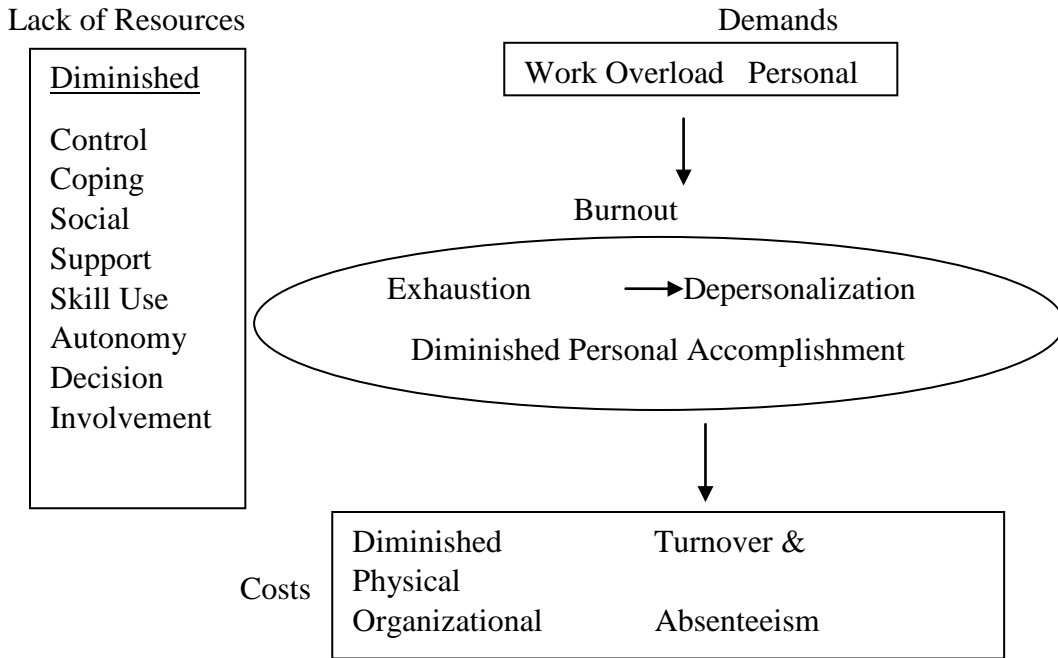


Figure 1. General Model of Burnout, with major antecedents and consequences.

Adapted from Maslach Burnout Inventory (3 rd ed.) by Maslach, Jackson & Leiter, 1996.

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Figure 2. Conceptual Framework for Empowerment

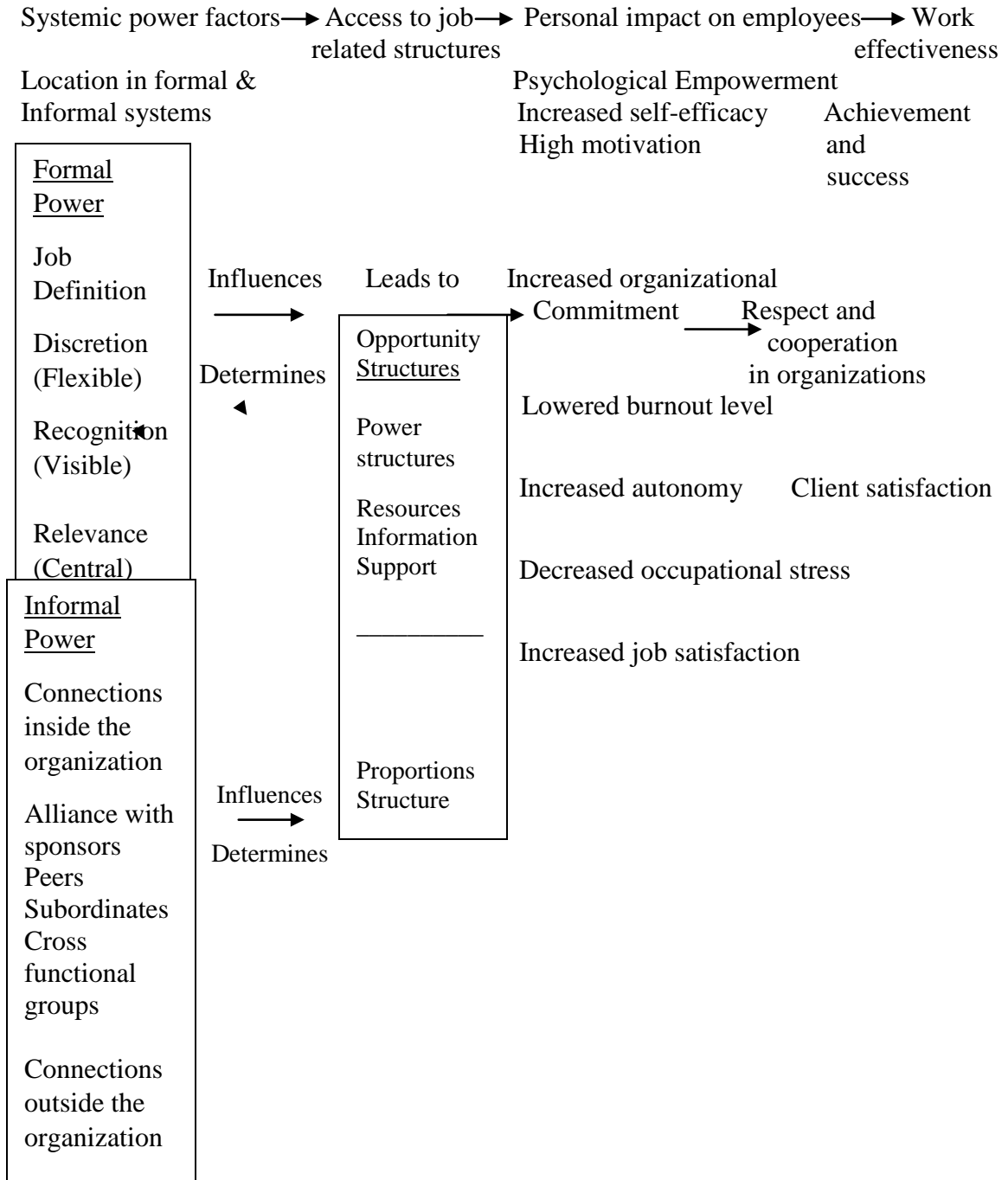


Figure 2. Relationships of concepts in Kanter's Structural theory of Power

in Organizations. Adapted from "A Theoretical Approach to Studying Work Empowerment

in Nursing: A Review of Studies Testing Kanter's Theory of

Structural Power in Organizations," by H.K. S. Laschinger, *Nursing Administration Quarterly*, 20, p. 27.

Hypotheses

The following hypotheses will be examined in new graduate nurses working in acute care facilities:

1. Role ambiguity is positively related to burnout in new graduate nurses
2. Role conflict is positively related to burnout in new graduate nurses.
3. Role overload is positively related to burnout in new graduate nurses
4. Empowerment is inversely related to burnout in new graduate nurses
5. Empowerment moderates the effect of role ambiguity on burnout in new graduate nurses
6. Empowerment moderates the effect of role conflict on burnout in new graduate nurses
7. Empowerment moderates the effect of role overload on burnout in new graduate nurses

Figure 3. Hypothesized relationships among the variables

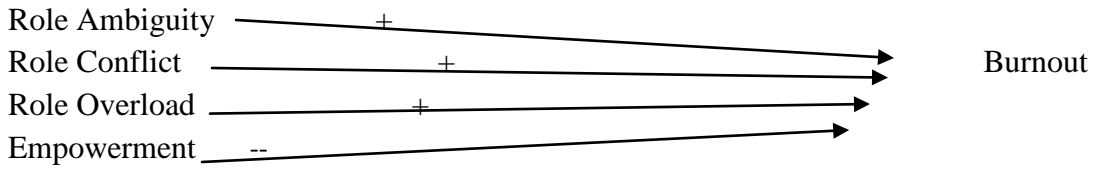


Figure 4. Moderation Model

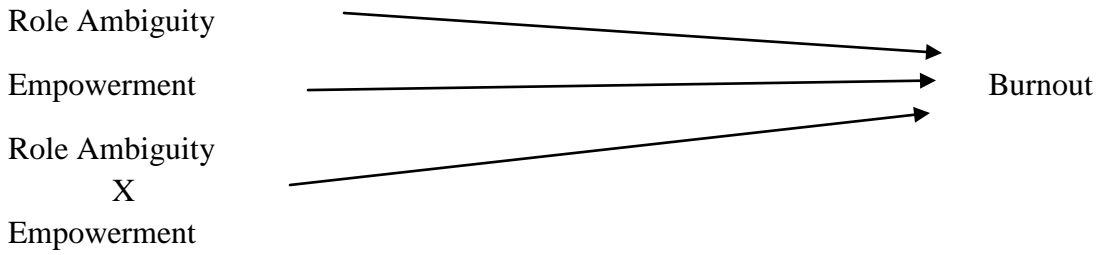


Figure 5. Moderation Model

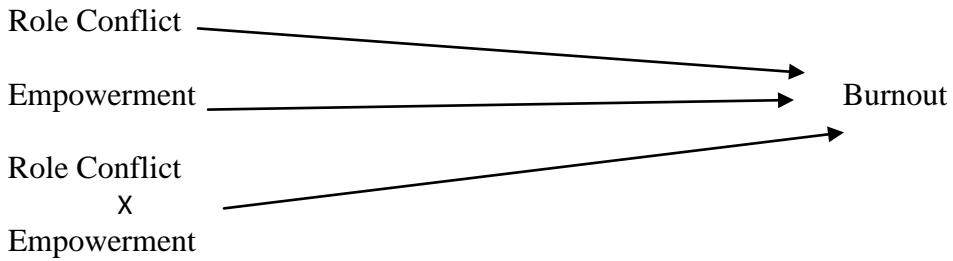
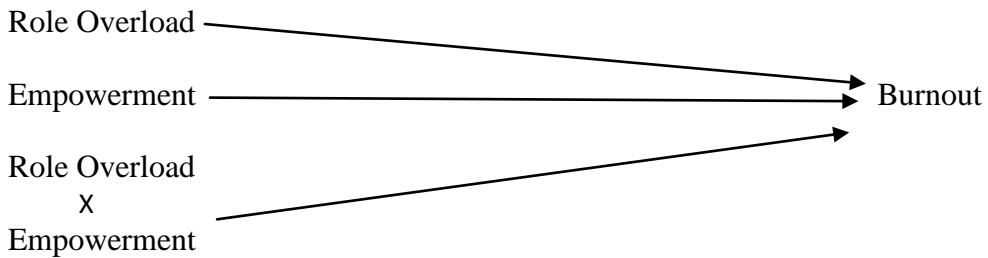


Figure 6. Moderation Model



Chapter III. Methods

This study used a descriptive correlational research design to examine the relationships among role stress (role ambiguity, role conflict, and role overload), empowerment and burnout. Using this type of design, the variables were examined as they naturally exist, without manipulation (Brink & Wood, 1998). In this chapter, the following were described; the research setting, the sample, sampling method, the various instruments as well as the procedure for data collection and analysis. The reliability and validity of the Maslach Burnout Inventory (MBI), the Individual Workload Perception Scale (IWPS) for Role Overload, the Role Ambiguity and Role Conflict Scale and the Empowerment Scale (CWEQ-II) were discussed.

Research Setting

The New York State Nurses Association (NYSNA) is both a professional and a collective bargaining organization within New York State. It is the oldest and largest state professional association for registered nurses in the nation with more than 36,000 members. NYSNA represents 91 health care facilities in New York City and Long Island and 49 health care facilities in upstate and western New York. Registered nurses employed at facilities where they are represented by NYSNA as their collective bargaining unit are required to join this organization, whereas registered nurses employed at other health care facilities, voluntarily join as a professional member. Information about the New York State Nurses association can be found on their official website ([http:// www.nysna.org](http://www.nysna.org)). NYSNA agreed to facilitate this research.

Sampling Method

The study sample included a convenience sample of male and female new graduate nurses. The subjects were recruited on-line by using the database from the NYSNA membership roster. This database contains newly graduated nurses (R. Gescedi, personal communication 1/30/2012). Eligible participants will be comprised of new graduate nurses that have two years of experience or less working as registered professional staff nurses in an acute care facility. The potential number of respondents from the NYSNA database is approximately 1500. Participants that may have been licensed practical nurses prior to becoming registered professional nurses were included in the study since the role of the registered professional nurse differs from that of a licensed practical nurse. Subjects who met the criteria for the study were requested to participate via an email from NYSNA. The email contained a brief description of the importance of the research project, the time commitment to complete the survey, an assurance of anonymity and an embedded link to the survey and stressed that participation was voluntary. Clicking on the link brought the participant to a consent page. To continue taking the survey, the respondent had to consent to participation. Due to anonymity, one week after the initial request, a reminder email was sent once a week for three weeks, to all potential subjects to encourage their participation in the study. This follow up email contained a thank you statement to those who have already responded. Respondents who did not meet the inclusion criteria and those who do not complete at least 90 % of the survey questions were excluded from the study.

Sample Size

To examine the relationships among the four independent variables (role overload, role ambiguity, role conflict, and empowerment) and one dependent variable (burnout), a sample size was calculated using the G-Power online statistical calculator (Faul, Erdfelder, Buchner, & Lang, 2007, 2009). A power analysis for Pearson correlation and multiple regression determined that a sample size of 96 was required to achieve a power of 0.80, a significance level of .05 and a moderate effect size (Cohen, 1988). In previous studies, the percentages of returned surveys that are not usable due to missing data or ineligibility range from 8 % (Lee et al., 2003; Laschinger, Finegan, Shamian & Wilk, 2001) to 25 % (O'Brien, 2011). Based on the empirical literature, participants were accepted into the study until a minimum of 120 surveys had been obtained which represents an oversampling of 25 % to ensure achieving the adequate number of surveys that can be used in the study. Based on previous research, a moderate effect size was used to investigate the relationships between empowerment and burnout (Sarmiento, et al., 2004). This study was limited since it was a convenience sample of nurses from only one state. Since participation in this study was voluntary, not all of the potential available population actually completed the survey.

Maslach Burnout Inventory (MBI)

Burnout was measured using the emotional exhaustion subscale of the Maslach Burnout Inventory (MBI) designed for people working in human service professions, especially health care (Maslach & Jackson, 1986). The entire instrument is a 22 item self-report tool that has 3 sub-scales which measure emotional exhaustion, depersonalization and personal accomplishment. Responses to each item range from 0-

6. The emotional exhaustion sub-scale has 9 items. Scores of ≤ 16 indicate low levels of burnout, 17-26 average levels and > 27 high levels of burnout. The depersonalization sub-scale has 5 items with statements. Scores of ≤ 6 indicate low levels of depersonalization, 7-12 average levels and ≥ 13 high levels of depersonalization. The personal accomplishment sub-scale has 8 items. Scores of ≥ 39 indicate low levels of burnout, 38-32 average levels and ≤ 31 high levels of burnout. High scores on the emotional exhaustion and depersonalization sub-scales and low scores on the personal accomplishment sub-scale are indicative of a high degree of burnout. To decrease the respondent's awareness that this was a tool to measure burnout which may have influenced their responses, this instrument was presented as a human services survey measuring job related attitudes (Maslach, Jackson, & Leiter, 1996). Although, the participants completed the entire instrument, only the emotional exhaustion subscale was used to measure burnout. Permission was obtained and purchased from the company Mind Garden (see Appendix C.)

Validity

Discriminant validity of the MBI was obtained by distinguishing the construct burnout from other similar constructs. Maslach, et al. (1996) compared the scores from a population comprised of social service and mental health workers ($n = 91$) on both the MBI and the Job Diagnostic Survey (Hackman and Oldham, 1974) a measure of general job satisfaction. There was a moderate negative correlation with both emotional exhaustion ($r = -.23, p < .05$) and depersonalization ($r = -.22, p < .02$) and a slightly positive correlation with personal accomplishment ($r = .17, p < .06$). In another study, Leiter and Durup (1994) conducted a confirmatory factor analysis to differentiate the two

constructs of burnout and depression. A sample of 307 workers, which included physiotherapists, occupational therapists, social workers, dieticians, pastors, and nurses were surveyed. The scores on the MBI and two depression scales, the Beck Depression Inventory (Beck, Ward, Mendelson, Mock & Erbaugh, 1961) and the depression subscale from the Profile of Mood States (McNair, Lorr & Droppleman, 1971) were analyzed. The sub-scales for burnout and depression loaded on separate second order factors. The results of this study confirmed that burnout was a separate and distinct construct from depression.

Convergent validity was demonstrated in two studies which correlated burnout scores of police officers with behavioral ratings by their spouses ($n = 142$), (Jackson & Maslach, 1982; Maslach & Jackson, 1979). Using a behavioral rating survey, spouses were requested to indicate the frequency of various behaviors at home which were indicative of emotional exhaustion and personal accomplishment. Police officers with high emotional exhaustion scores on the MBI were characterized by their spouses as upset and angry ($r = .34, p < .001$), tense or anxious ($r = .27, p < .001$), physically exhausted ($r = .20, p < .01$), and complaining about problems ($r = .26, p < .001$). Police officers with high personal accomplishment scores on the MBI were rated by their spouses as cheerful or happy ($r = .25, p < .01$) and proud of their work ($r = .24, p < .01$).

Reliability

A high internal consistency reliability of the MBI was demonstrated by Maslach and Jackson (1981) in a sample of 420 participants from various human service professions using Cronbach's alpha coefficient. In this study, the reliability coefficients for the subscales were 0.89 for emotional exhaustion, 0.77 for depersonalization and

0.74 for personal accomplishment. Test-retest reliability of the MBI was obtained in another study, from a sample of graduate students who were studying social welfare and administrators in a health agency (N = 53). The tests were separated by a 2-4 week interval. The test-retest reliability coefficients for the subscales were 0.82 for emotional exhaustion, 0.69 for depersonalization, and 0.80 for personal accomplishment (Maslach & Jackson 1981). Poghoysan, Aiken and Sloane (2009) used the MBI to evaluate burnout levels among 54,738 nurses representing 646 hospitals from the following 8 countries; United States, Canada, England, Germany, New Zealand, Japan, Russia and Armenia. Analysis of the data demonstrated that the 3 sub-scales of the MBI had reliability coefficients reported for each of the eight countries all above the 0.70 range. The emotional exhaustion subscale had the highest Cronbach's alpha of 0.93 from the United States and 0.80 from Armenia. The emotional exhaustion subscale of the MBI is frequently used in research as a measure of burnout. Cronbach's alpha of > 0.88 for this subscale has been reported in the following studies; 0.91 (Aiken, Clarke, & Sloane, 2002), 0.89 (Flynn et al., 2009), 0.91 (O'Brien, 2011), 0.90 (Harwood et al., 2010), and 0.91 (Laschinger et al., 2009). Due to these consistently high Cronbach's alpha's > 0.88 and extensive use in research, the emotional exhaustion subscale will be used to measure burnout in this study.

In summary, reliability and validity of the MBI has been established across various human service professions such as, police officers, social workers and nurses as well as internationally. Therefore, this tool was appropriate and used to examine burnout in new graduates working in acute care facilities.

Role Conflict and Role Ambiguity Scale

Role conflict and role ambiguity was measured using the Role Conflict and Role Ambiguity Scale developed by Rizzo et al. (1970). This scale is the most commonly used tool in research on these variables (Peiro et al., 2001; Lee et al., 2003; Ortqvist & Wincent, 2006; Kim & Stoner, 2008). Responses are scored on a 7 point Likert scale ranging from 1= very false to 7= very true, depending on the presence of these conditions in the workplace. The Role Conflict sub-scale has 8 items with statements such as: “I have to do things that should be done differently” or “I do things that are apt to be accepted by one person and not accepted by others.” Scores are averaged. Higher scores indicated greater role conflict. The Role Ambiguity sub-scale has 6 items with statements such as: “I feel certain about how much authority I have” and “I know exactly what is expected of me.” Scores are averaged. Low scores indicated greater role ambiguity.

Construct Validity

The construct validity of the Role Conflict and Role Ambiguity Scale was established by Rizzo, et al. (1970) using exploratory factor analysis. Responses to the role questionnaire items were tested on two separate groups. The first group (n = 199) represented 35% of the personnel from the central office and main plant of an engineering firm and 35% of the research and engineering division. The second group (n = 91) represented 65% of the research and engineering personnel at the same firm. To test relationships and structural relationships of the role conflict and role ambiguity definitions, the responses to the role questionnaires from these two samples were factor analyzed using an image covariance method and rotated using a

varimax criterion. Factor I was entitled role conflict and it included items consistent with its definition. Nine of the fifteen role conflict items had loadings greater than or equal to 0.30. This factor accounted for 32 % of the common variance. Factor II was entitled “role ambiguity” and it included items consistent with its definition. Nine of the fifteen role ambiguity items had loadings greater than or equal to 0.30 on this factor. Factor II accounted for 26.3% of the common variance of this set.

Confirmatory factor analysis was used by Gonzalez-Roma and Lloret (1998) to support the construct validity of the Role Ambiguity and Role Conflict Scale. This research was conducted in Spain using two different samples. Subjects in the first sample (n =173) represented manufacturing, trade organizations, hospitals and educational institutions. Within this sample, 51% were men and 69% were in non-management positions. Subjects in the second sample (n =273) were comprised of employees from a government agency. Within this sample, 56.8% were female and 67.8 % were in non-management positions. Five alternative factor models were evaluated in these two groups using a number of confirmatory factor analyses. The model that showed the lowest expected cross validation index (ECVI) was the one that included the three factors of role conflict , role ambiguity and role overload and a second order role stress factor (1.54 for Sample 1 and 1.19 for Sample 2). All the factor loadings of the second-order role stress factor on the first-order factors of role conflict, role ambiguity, and role overload were statistically significant for sample 1 ($P < .01$, .87, -.73, and .81) and for sample 2 ($P < .01$, .86, -.71 and .83).

Reliability

Rizzo et al. (1970) used two different samples in their original research and reported internal consistency coefficients for role conflict of 0.82 in both samples and internal consistency coefficients for role ambiguity of .78 in sample 1 and .81 for sample 2. The research conducted by Gonzalez-Roma and Lloret (1998) also used two different samples and reported internal consistency coefficients for the Role Conflict Scale in both samples of 0.85. The internal consistency for the Role Ambiguity Scale in Sample 1 was 0.78, and in Sample 2, 0.82

Subsequent research, which used the Role Conflict and Role Ambiguity scales, has produced similar results. A longitudinal sample of 145 health care professionals (which included nurses) conducted by Peiro et al.(2001) yielded an internal consistency (Cronbach's coefficient) for the Role Conflict Scale of 0.80 at time 1 and a coefficient of 0.83 at time 2 (one year later). Within the same study, the internal consistency (Cronbach's coefficient) for the Role Ambiguity scale was 0.79 at time 1 and 0.78 at time 2. In a sample of 178 nurses in Korea, the Cronbach's coefficients were 0.77 for the Role Conflict Scale and 0.76 for the Role Ambiguity scale (Lee et al., 2003). In their research, using a random sample of 346 social workers in California, Kim and Stoner (2008) reported a Cronbach's coefficient of 0.88 for the Role Conflict Scale and 0.84 for the Role Ambiguity Scale.

In summary, the empirical literature supported the use of the Role Ambiguity and Role Conflict Scale, in research that focused on these aspects of role stress in employees, including nurses in non-management positions. This instrument was a

valid and reliable measurement tool for research on the topic of role stress in new graduate nurses.

Individual Workload Perception Scale

Role overload was measured using the workload sub-scale from the 29 - item Individual Workload Perception Scale- Revised (IWPS-R) developed by Cox et al. (2006). This instrument was derived from the original 46-item IWPS developed by Cox and tested on 687 nurses (2002). The IWPS-R has 5 subscales that measure manager support, peer support, unit support, workload and intent to stay. The workload subscale of the IWPS-R has 6 items. The responses of the participants ranged from 1 = strongly disagree to 5 = strongly agree. Examples of items in the sub-scale are: "I am able to take at least a 30 minute meal break during my shift" and "I have voiced concerns about my workload being too heavy to the nurse manager or charge nurse." Scores for this subscale range from 6 to 30. A low score indicates high workload. The operational definition of workload used for this instrument is the extent to which pressure and urgency are present within the work environment. The entire IWPS-R was administered to the respondents and the workload subscale was used to measure role overload. This use of this subscale to measure a nurse's workload is supported in the literature (Flynn et al., 2009).

Validity

Content validity for the original IWPS was established by three nurse executives and two experts in the field of measurement psychometric analysis (Cox, 2002). A five factor model of the IWPS-R was supported by factor analysis which established construct validity for this instrument (Cox et al., 2006). All items in the five factor

model had a factor loading which ranged from 0.45 to 0.78. The greater the loading the more the variable is a pure measure of the factor (Tabachnick & Fidell, 2001). Comrey and Lee (1992) recommend that loadings in excess of 0.71 (50% overlapping variance) be interpreted as excellent, 0.63 (40% overlapping variance) very good, 0.55 (30% overlapping variance) good and 0.45 (20% overlapping variance) fair.

The IWPS-R was translated into Taiwanese (T-IWPS-R) and psychometric testing was performed (Lin, Lin, Yeh, Lin & Hwang, 2011). Content validity was established by five experts using the content validity index (CVI). The CVI is the percentage of items rated as a 3 or 4 by the experts on a four point scale ranging from 1 = not relevant to 4 = very relevant (Waltz, Strickland & Lenz, 2005). The CVI for the T-IWPS-R was 0.93. Guidelines for acceptable levels of a CVI are 0.80 or greater (Waltz et al., 2005). This instrument was tested on an initial sample of 30 nurses to establish the time for completion of the questionnaire. The Cronbach's alpha for the total T-IWPS-R in this sample was 0.83. After analyzing the psychometric results, the instrument was used on a convenience sample of 344 nurses who were involved in direct patient care. Factor analysis was used to establish construct validity. Using a varimax approach, orthogonal rotation was used. All items in the five-factor model had a factor loading above 0.55 which demonstrated that the items had a good correlation with individual factors in the T-IWPS-R (Comrey & Lee, 1992).

Reliability

In their initial research using the IWPS -R Cox et al (2006) reported a Cronbach's alpha of 0.92 for the total IWPS and 0.75 for the IWPS-R workload subscale. Lacey et al (2007) conducted a study of 3,337 nurses from 11 states, 15

institutions and 292 various units using the revised Individual Workload Perception Scale (IWPS-R). This research examined staff nurses perceptions of their workload and their work environment. The alpha coefficient for the workload subscale in this study was 0.70. Lin et al., (2011) reported a high reliability for the total T-IWPS-R of 0.88 and a reliability of 0.65 for the workload sub-scale in their research conducted in Taiwan using a sample population of 344 nurses.

In summary, as of 2009, the IWPS-R has been administered in 27 different hospitals, including three international hospitals. The number of participants who have taken the IWPS and the IWPS-R is over 13,700 (Cox, Teasley, Lacey & Olney, 2010). The current internal consistency reliability for the workload scale is 0.80. (Cox et al., 2010). Based on the empirical literature, the IWPS-R and its workload subscale, is a valid and reliable tool for measuring workload in new graduate nurses.

Conditions of Work Effectiveness

Empowerment was measured using the Conditions of Work Effectiveness Scale –II (CWEQ-II) developed by Laschinger, Finegan, Shamian and Wilk (2001) to measure the six components of structural empowerment in the work environment of nurses. Prior to the development of the CWEQ-II, previous research tested some of the components of Kanter's (1979) theory using the CWEQ and modified for nursing by Chandler (1986). Laschinger (1996) developed the Job Activities Scale (JAS) and the Organizational Relationship Scale (ORS) to expand testing of Kanter's theory. The CWEQ measured empowerment structures of opportunity, information, support and resources. The JAS measured formal power and the ORS measured informal power. The CWEQ –II was

designed using items from these three instruments. The CWEQ-II was developed to further test Kanter's theory of empowerment (1993) which describes structures within organizations that are necessary to create an empowering work environment.

The CWEQ-II measures access to the empowerment structures discussed in Kanter's theory. Six sub-scales contain 19 items in which participants' rate access to these structures in their workplace on a 5 point Likert scale ranging from "none" to "a lot." Examples of items in the sub-scales are: "How much of each kind of opportunity do you have in your present job? "The chance to gain new skills and knowledge on the job" or in another sub-scale "How much access to support do you have in your present job?" Each sub-scale contains three items and is scored by taking the average of the responses. The score for each sub-scale ranges from 1 to 5. A total empowerment score, which can range from 6 to 30, is determined by adding the scores from the sub-scales. Empowerment scores of 6 to 13 indicate low levels of empowerment, scores of 14 to 22 indicate moderate levels and scores of 23 to 30 indicate high levels of empowerment (Laschinger et al., 2001; Lautizi, Lashinger & Ravazzolo, 2009). Information about the CWEQ –II can be obtained from Laschinger's official website at the Western University in Ontario, Canada (<http://www.publish.uwo.ca>).

Validity

The CWEQ-II (Laschinger et al., 2001) was derived from the version of Kanter's CWEQ (1979) adapted for nursing by Chandler (1986). The CWEQ II was developed by taking three items from each of the sub-scales of the CWEQ, three items from the JAS and four items from the ORS that best described that scale. This method is supported by Kline (1998) who proposed that three indicators per latent variable were

shorter and adequate to depict the construct being tested. Using structural equation modeling, the three items that were selected for each scale, were subjected to a second confirmatory factor analysis for structural empowerment. The results of this analysis indicated a good fit of the factor structure ($\chi^2 = 279$, $df = 129$, $CFI = 0.992$, $IFI = 0.992$, $RMSEA = 0.054$). In structural equation models, a good fit is indicated by a Comparative Fit Index (CFI) and Incremental Fit Index (IFI) of 0.90 or higher (Kline, 1998) and a Root Mean Square Error of Approximation (RMSEA), which is a summary of the average covariance residuals, between 0 and 0.06 (Hu and Bentler, 1999). Laschinger, Finegan, Shamian and Wilk (2001) developed a two item global empowerment scale to test the construct validity of the CWEQ II. This global empowerment scale was derived from an eleven item instrument entitled the Organizational Description Opinionnaire (ODO) designed to measure empowering characteristics of an organization. Reliability of the ODO ranged from 0.89 to 0.91 across various studies (Laschinger, 1996). The original CWEQ was correlated with the ODO for construct validity. In their research, Laschinger et al. (2001) found that scores from the CWEQ II had a high correlation with their two item measure of global empowerment ($r = 0.56$) which established additional support for the construct validity of this instrument. The global empowerment two item scale is always administered with the CWEQ-II for construct validation. In China, researchers examining empowerment, job satisfaction and turnover intentions among clinical nurses ($n = 189$) reported a correlation of $r = 0.55$, $p = 0.01$ with a 2 item global empowerment scale (Cai & Zhou, 2009). In Finland a study was conducted examining the effect of structural and psychological empowerment on nurses ($n = 519$) and the correlation between the

translated version of the CWEQ II and a translated two item global empowerment scale was $r = 0.60$, $p = 0.01$ which also supported the construct validity of this instrument (Knoll & Van Linge, 2009).

Reliability

Laschinger et al. (2001) reported internal consistency reliability for the CWEQ II of 0.82 in their initial research on this instrument. Cronbach's alpha reliabilities for the CWEQ II in subsequent studies were similar. Research conducted with a sample of critical care nurses ($n = 4,268$) examining empowerment, critical care certification and intent to leave revealed a Cronbach's alpha of 0.91 for the total empowerment score (Fitzpatrick, Campo & Lavandero, 2011). In a study that examined empowerment and patient safety in adult critical care units ($n = 257$) the Cronbach's alpha was 0.89 (Armellino et al., 2010). Not only the English version, but the translated versions used internationally have reported acceptable results. In China, researchers examining empowerment, job satisfaction and turnover intentions among clinical nurses ($n = 189$) reported a Cronbach's alpha of 0.85 for the CWEQ II. A study conducted by researchers in Taipei City examining empowerment and work stress among nurses ($n = 178$) in long term care facilities reported a Cronbach's alpha of 0.90 for the CWEQ II (Li, Chen & Kuo, 2008). In Finland a study was conducted examining the effect of structural and psychological empowerment on nurses ($n = 519$). The Cronbach's alpha coefficient for the Dutch version of the CWEQ II was 0.88 (Knol & Van Linge, 2009).

In summary, the validity and reliability of the CWEQ II have been demonstrated in international research among nurses working in varied settings, including samples of new graduates (Laschinger et al., 2010; Laschinger, Wilk, Cho & Greco, 2009). Based

on the empirical literature, the CWEQ II is an appropriate measurement tool for use in research investigating empowerment in new graduate nurses.

Demographic Questionnaire

The principal investigator developed the Demographic Questionnaire for this study to capture the characteristics of the respondents as well as their working environment. Participants were requested to respond to the following questions: age, gender, educational preparation, date of graduation, date passed NCLEX exam, date of hire, type of unit and shift, classification of hospital (community, tertiary care, academic medical center), the hospital patient capacity and magnet status (magnet, magnet aspiring, non-magnet). A few questions were included that refer to the respondent's transition into their professional role, such as, length of orientation, number of preceptors, presence of a nurse residency program and a mentoring program in their organization.

Data Collection Procedure

Potential participants having two years of experience or less as a registered professional nurse were contacted via email by the Director of Education from NYSNA, who addressed the significance of the study. Respondents who may have been licensed practical nurses previously were included in the study, since the role of the registered professional nurse is different from the role of the licensed practical nurse. Potential participants were given information about the study, voluntary participation, the approximate time commitment for completion of the surveys and the link to the survey questions. Upon clicking on the link, the respondent was required to read the informed

consent and selected either the “yes” or “no” option to the following question: “Do you agree to the consent information listed on this form?” Selecting the yes response allowed the respondent access to the survey. If the respondent selected no, an exit page appeared, explaining the importance of complying with the informed consent as a criteria for participation in the study. The study instruments were available on-line for participants to access at their convenience and complete in one session. For this study, anonymity was maintained by having NYSNA contact the participants without divulging their identity to the researcher. The participant accessed the survey by clicking on a link to Survey Monkey, a widely used licensed website, which used a Web Link Collector designed not to collect or store the IP address of the respondent with the survey results (<http://www.surveymonkey.com>). The participant was identified only with a code number. Survey monkey uses Secure Sockets Layer (SSL) encryption which is a secure server developed to transmit information via the internet. This secure server is also in compliance with the Health Insurance Portability Protection Act (HIPPA). Survey Monkey uses Verisign Certificate Version 3, 128 bit encryption which was recognized in a survey link by having an “s” in the http. url address: [www.surveymonkey .com/s](http://www.surveymonkey.com/s). All responses were encrypted as they were delivered into the "Analyze" section of the principal investigator's account and when exported to the personal computer of the principal investigator. The company policy stated that the principal investigator is the sole owner of the data.

Human Subjects Protection

To ensure that the rights of human subjects were protected, this study was submitted for approval to the Institutional Review Board of Rutgers, the State University

of New Jersey prior to collecting any data. Since this study met the criteria for posing minimal risk to subjects, as they respond anonymously to survey questions, an expedited review was requested and granted. For a study to be categorized as minimal risk it must meet the following criteria: not pose a risk to an individual that is greater than that which a person experiences in their normal daily life, present no risk of criminal or civil liability, and will not harm the participant's reputation or financial status (Byerly, 2009). Information provided to participants stressed that participation was entirely voluntary, included a description of the research study, and revealed the method for ensuring anonymity which was an essential component of this research study. The Web Link Collector option on survey monkey provided completely anonymous responses to surveys by providing a link that was pasted into the outgoing message of another email client. This link did not allow collection of the respondent's IP address with the survey results. Retrieved from <http://www.surveymonkey.com>. Therefore, data obtained in this study did not identify any participant or hospital by name. If respondents had any questions or concerns about the study they were directed to contact the principal investigator whose email address was available in the initial email requesting their participation. Raw data was compiled on a spreadsheet and stored in a database protected by a password known only to the principal investigator. Back-up files on any external drives were secured and continue to be stored in a locked cabinet. All files will be destroyed based on the institutional review board guidelines established for retention of research data.

Data Analysis Plan

Data were analyzed using the Statistical Package for the Social Services Version 21.0 for Windows. The surveys from the four instruments were scored in accordance with the guidelines provided by the authors. The data were examined for missing data to determine if imputation techniques can be utilized (Kline, 1998). Cohen and Cohen (1983) suggest the following for a variable that has missing data of ten percent or less: retain the variable and handle the missing data. In addition, Tabatchnik and Fidell (2007) discuss the importance of identifying a pattern to the missing data such as a random or systematic (nonrandom) occurrence. In this study, cases with ten percent or less of missing data on a variable were not handled using expectation minimization (EM). This procedure is a two-step iterative process that creates estimated values for missing data by employing expectation (E-step) and maximization (M-step) algorithms to achieve expected values (Tabachnick & Fidell, 2007). Musil, Warner, Yobas and Jones (2002) conducted a study that compared five methods of handling missing data by comparing an actual data set (n = 492) and a simulated data set (n = 96) with missing data that was taken from the original data set. Five techniques were analyzed and compared; listwise deletion, mean substitution, simple regression, regression with an error term and expectation maximization (EM) algorithm. The EM technique created results most similar to the data in the original dataset. The technique of mean substitution was noted to be the least accurate. In this study missing data were excluded from analysis. Descriptive statistics such as mean values, standard deviations, skewness and kurtosis were analyzed. Since the variables being measured in the sample were normally distributed, parametric testing was conducted. Since the data did not fail to

meet the assumptions of normal distribution, no transformation of data was needed to normalize the data and improve the analysis. Transformation of data did not have to be continued until the transformation process generates the skewness and kurtosis values nearest zero with minimal outliers (Tabatchnik & Fidell, 2007). Since the assumptions for a correlation study were met, the Pearson product moment correlation coefficients were used to quantify the relationships between role stress, empowerment and burnout. Confidence intervals of 95% of the Pearson coefficients were calculated to assess the precision of the correlation coefficients. A significance level of 0.05 was used to test the research hypotheses in this study.

Hypotheses one through four was tested using correlational analysis.

Hypotheses five through seven, which represent the moderation models, was tested using hierarchical multiple regression. According to Barron and Kenny (1986), a moderator functions as a variable that can modulate the effect of an independent variable on a dependent variable by changing the direction or the strength of the relationship. This causal relationship is altered with changes in the moderator.

For hypothesis five, using hierarchical multiple regression, role ambiguity and empowerment were entered separately to predict the dependent variable, burnout. Then an interaction term was created and entered to represent the interaction between the predictor, role ambiguity and the moderator, empowerment on the dependent variable, burnout (Cohen et al., 2003). This process was repeated for the other two moderation models in hypothesis six and seven. There was no support for this moderation model, since the joint relationship of the two independent variables did not account for a variance in the dependent variable that was not explained by either variable alone

(Bennet, 2000). The presence of a moderator effect occurs only when the interaction term accounts for a variance in the dependent variable that is statistically significant (Bennet, 2000). In the moderation model it was expected that nurses who experienced role ambiguity, role conflict, role overload and had high empowerment scores would have lower levels of burnout. Whereas nurses who experienced role ambiguity, role conflict, and role overload and had low empowerment scores would have higher levels of burnout.

The following hypotheses were examined in new graduate nurses working in acute care facilities:

1. Role ambiguity is positively related to burnout in new graduate nurses
2. Role conflict is positively related to burnout in new graduate nurses.
3. Role overload is positively related to burnout in new graduate nurses
4. Empowerment is inversely related to burnout in new graduate nurses
5. Empowerment moderates the effect of role ambiguity on burnout
in new graduate nurses
6. Empowerment moderates the effect of role conflict on burnout
in new graduate nurses
7. Empowerment moderates the effect of role overload on burnout
in new graduate nurses

Figure 3. Hypothesized Relationships of the Variables

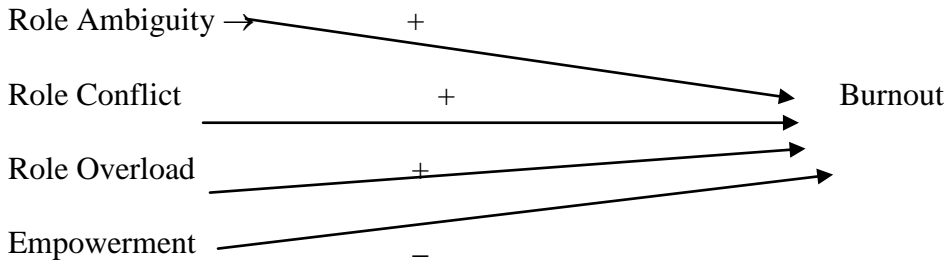


Figure 4. Moderation Model

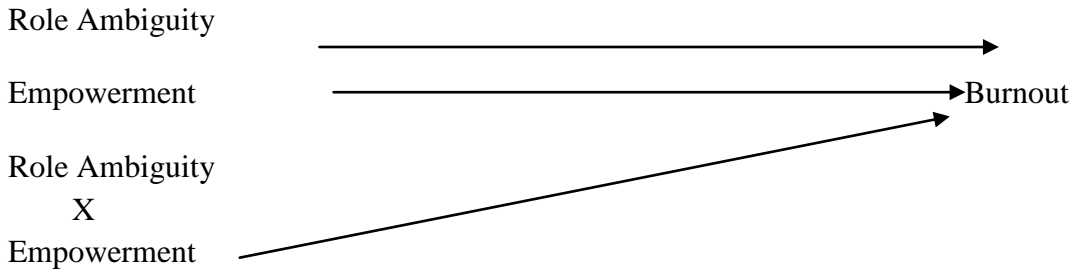


Figure 5. Moderation Model

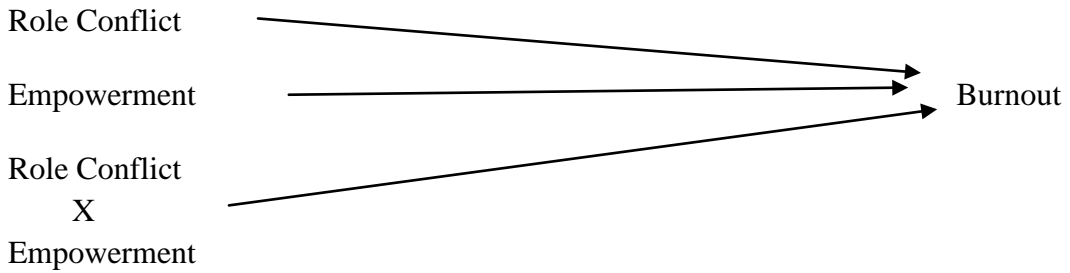
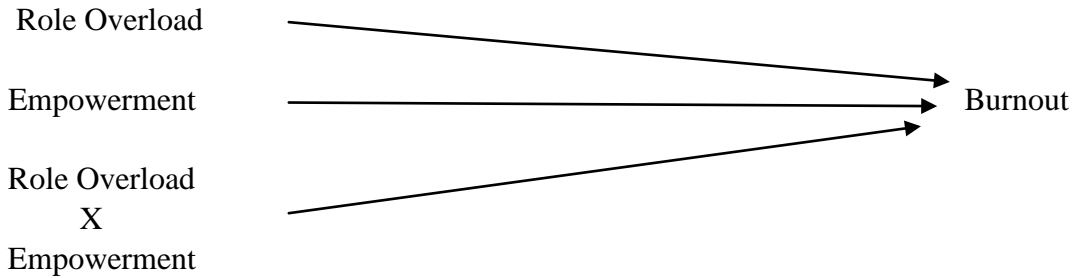


Figure 6. Moderation Model



Chapter IV. Analysis of the Data

The purpose of this study was to examine the relationships among role stress, empowerment and burnout in new graduate nurses that have two years of experience or less who are working in acute care facilities. The three variables that comprise role stress; role ambiguity, role conflict and role overload were measured using the following instruments: the Role Ambiguity and Role Conflict Scale (Rizzo, House & Lirtzman, 1970) and the workload subscale from the Individual Workload Perception Scale-Revised (IWPS-R)(Cox et al.,2010) for Role Overload. Empowerment was measured using the Structural Empowerment Scale (CWEQ- II) (Laschinger, 2001) and the emotional exhaustion subscale of the Maslach Burnout Inventory (MBI) (Maslach and Jackson, 1986) was used to measure burnout. An email invitation was sent to members of NYSNA requesting nurses with two years of experience or less working in acute care hospitals to participate in this research study. Of the eligible participants, 115 nurses, who identified themselves as new graduate nurses meeting the criteria, agreed to participate in this study. In this chapter, the findings from the analysis of the data are presented.

Demographic Characteristics

The majority of the sample was female, was age 30 years or less, had a bachelor's degree, and worked the night shift (Table 1A). Almost half of the participants worked on a Medical-Surgical unit and a similar number were employed in an academic medical center. Only a few participants worked in a hospital that had achieved magnet

status. The majority participated in an orientation program which was 3 months or less (Table 1B).

Table 1 A

Demographics

Demographics	Frequency	Percent
Years of Age (N= 114)		
< 30	45	39.5%
31- 40	39	34.2%
41- 50	22	19.3%
51- 60	7	6.1%
Missing	1	0.9%
Gender (N=114)		
Female	95	82.6%
Male	19	16.7%
Missing	1	0.9%
Highest Level of Education (N=115)		
Associate	43	37.4%
Bachelor's	70	60.9%
Master's	2	1.7%
Type of Patient Care Unit (N=115)		
Medical/Surgical	54	47%
Pediatrics	7	6.1%
Intensive Care Unit	7	6.1%
Telemetry	16	13.9%
Maternity	5	4.3%
Psychiatry	1	0.9%
Other	25	21.7%
Magnet Hospital (N=113)		
Yes	11	9.6%
No	102	88.7%
Missing	2	1.7%
Shift (N=115)		
Day	48	41.7%
Night	64	55.7%
Missing	3	2.6%

Table 1B

Demographics (Orientation Program)

Demographics	Frequency	Percent
Length of Orientation (N=115)		
< 1 month	5	4.3%
1-3 months	89	77.4%
4-6 months	19	16.5%
> 6 months	2	1.7%
Number of Preceptors (N=115)		
< 3	71	61.7%
4 to 6	19	16.5%
> 6	13	11.3%
Nurse Residency Program (N=115)		
Yes	23	20%
No	92	80%
Mentoring Program (N=115)		
Yes	10	8.7%
No	105	91.3%

Statistical Description of the Variables

The data were entered into the Statistical Package for the Social Sciences (SPSS 21.0). Descriptive statistics such as mean values, standard deviations, skewness and kurtosis were analyzed (see Table 2). Preliminary analyses were conducted to confirm the data met the assumptions of multivariate analysis, including normality, linearity, multicollinearity, and homoscedasticity. Missing data were excluded from analysis. Scatterplots (Appendix A) confirmed the linear relationship between the independent and dependent variables, and Normal P-P Plots and scatterplots of the

standardized residuals (Appendix B) for each of the regression models tested suggest the data were normally distributed, in that points in the P-P plot generally fell along a straight diagonal line and points in the scatterplot showed no distinct shape. Outliers were inspected by assessing the Mahalanobis distances produced in each model: for each model, two to three cases had values above the critical value; however, when the model was re-run with the possible outlying cases removed, the significance of the model and the beta estimates did not change, nor did the R^2 . As such, the original models are reported here. As seen in Table 4, multicollinearity did not appear to be an issue with these data. Since the variables being measured in the sample met the assumptions; parametric testing was conducted.

Table 2

Distribution of independent and dependent variables

	Burnout	Role Ambiguity	Role Conflict	Role Overload	Empowerment
Skewness	.089	-.580	-.495	.089	-.604
SE	.257	.257	.257	.257	.257
Kurtosis	-.736	2.541	-.405	-.857	2.541
SE	.508	.508	.508	.508	.508
Participant's Scores	9.9 -54	1.67 - 7	1 - 7	6 - 28	9 .33 - 29
Possible Score Range	0 - 54	1 - 7	1 -7	6 - 30	6 – 30
Mean	26.62	5.16	4.66	16.40	17.46
SD	13.46	1.26	1.43	5.56	3.93
Median	25.02	5.17	4.94	16	17.75

Dependent Variable

Scores on the Emotional Exhaustion subscale of the MBI ranged from 9.9 to 54 ($M = 26.82$, $SD = 13.46$). Scores of 27 or higher on the MBI indicate high levels of burnout, 17 to 26 indicate moderate burnout levels and scores of 0 to 16 indicate low levels of burnout (Maslach, Jackson & Leiter, 1996). In this sample of new graduate nurses, 45 % reported high levels of burnout, 30 % reported moderate levels of burnout and 24 % reported low levels of burnout.

Independent Variables

The Role Ambiguity Scale consists of six items that were ranked on a Likert scale ranging from 1 to 7. Consistent with the author's guidelines, scores on the Role Ambiguity Scale were averaged to obtain the participant's score (Rizzo et al., 1970). The scores for this variable ranged from 1.67 to 7 ($M = 5.09$, $SD 1.27$). In this sample, 12.5 % of nurses had scores below 3.5, indicating high levels of role ambiguity.

The Role Conflict Scale consists of eight items that were ranked on a Likert scale ranging from 1 to 7. Scores were averaged to obtain the participant's score (Rizzo et al., 1970). The scores for this variable ranged from 1 to 7 ($M = 4.72$, $SD 1.37$). In this sample, 77.7 % of nurses experienced scores above 3.5 which indicated high level of role conflict

Role Overload was identified by computing scores on the Workload subscale of the IWPS-R (Cox et al., 2010). The participants' scores ranged from 6 to 30 ($M = 16.40$, $SD 5.56$). Scores can range from a low of 6 to a high of 30. Lower scores on

this subscale indicate high workloads. Scores from this sample indicated 39.85 % reported high workloads.

Scores on the CWEQ-II ranged from 9.33 to 28.75 ($M = 17.46$, $S.D. = 3.93$). Scores between 23 to 30 indicate high levels of empowerment, 14 to 22 indicate moderate empowerment and 6 to 13 indicate low levels of empowerment (Laschinger et al., 2001). In this sample, 10.7% reported high levels of empowerment, 79.6% reported moderate levels and 9.7 % reported low levels of empowerment.

Psychometric Properties of the Instruments

The internal consistency of each instrument was calculated. The values are reported in Table 3. A value of 0.70 or above has been established by some researchers as the lowest acceptable value for an alpha reliability coefficient (Kerlinger & Lee, 2000) and all scales met this requirement. Furthermore, the alpha coefficients are consistent with the values obtained by the researchers who designed the instruments and other researchers that have utilized these instruments in similar populations. Peiro et al. (2001) reported a Cronbach's alpha coefficient of 0.79 for the Role Ambiguity Scale and 0.83 for the Role Conflict Scale in their research conducted on a sample of health care workers which included nurses. In their initial research using the IWPS –R on a sample of registered nurses, Cox et al. (2006) reported a Cronbach's alpha of 0.92 for the total IWPS and 0.75 for the IWPS-R workload subscale. The Cronbach's alpha coefficient for the CWEQ-II in previous studies conducted on samples of registered nurses has ranged from 0.78 (Cho et al., 2006) to 0.89 (Grecco et al., 2006). Maslach and Jackson (1981, 1986) reported a Cronbach's alpha coefficient of 0.89 for the MBI emotional

exhaustion subscale and Laschinger et al. (2010) reported a coefficient of .94 for this sub-scale in their research using a sample population of registered nurses.

Table 3.

Alpha reliability coefficients for the instruments used in this study

	Role Ambiguity	Role Conflict	IWPS – R Workload Scale	CWEQ -II	MBI – Emotional Exhaustion Subscale
Cronbach’s alpha	0.87	0.88	0.81	0.88	0.93

Results of Hypotheses Testing

Pearson product-moment correlation coefficients were used to quantify the relationships between role stress, empowerment and burnout. Confidence intervals of 95% of the Pearson coefficients were calculated to assess their precision. A significance level of 0.05 was used to test the research hypotheses in this study. Using Pearson product-moment correlational analysis, Hypotheses 1 through 4 were tested. The hypothesized relationships were examined using a one-tailed test.

Hypothesis 1 stated that there would be a positive relationship between role ambiguity and burnout in new graduate nurses. A low score on the Role Ambiguity Scale indicates greater role ambiguity; while a high score on the MBI emotional exhaustion subscale, indicates burnout. Based on the directionality of the scales, correlational analysis supported this hypothesis ($r = -.426, p = .000$).

Hypothesis 2 stated that a positive relationship would exist between role conflict and burnout in new graduate nurses. As the role conflict score increased, indicating that greater role conflict was being experienced, the score on the MBI- emotional exhaustion subscale increased as well. Correlational analysis supported this hypothesis ($r = .654, p = 0.00$).

Hypothesis 3 stated that role overload would be positively related to burnout in new graduate nurses. A low score on the Workload scale of the IWPS-R indicates a high degree of role overload and a high score on the MBI emotional exhaustion subscale indicates burnout. Based on the directionality of the scales, correlational analysis supported this hypothesis ($r = -.706, p = .000$).

Hypothesis 4 stated that empowerment is inversely related to burnout in new graduate nurses. High scores on the CWEQ –II indicate greater empowerment and a high score on the MBI emotional exhaustion subscale indicates greater burnout. Correlational analysis supported this hypothesis ($r = -.550, p = 0.000$).

Table 4

Correlational Matrix of Variables for Hypotheses 1, 2, 3 & 4

Variable	Role Ambiguity	Role Conflict	Role Overload	Empowerment
Burnout	-.426 ***	.654 ***	-.706 ***	-.550 ***
N = 107	N = 104	N = 104	N = 105	N = 96

*** $p < 0.001$ level (1 tailed)

Hypotheses 5 through 7 were examined using a two- step hierarchical regression analysis to test the moderation model (Barron and Kenny, 1986). The data were evaluated and met the assumptions for regression analysis. Although there were strong

correlations among the variables, they were not multicollinear. According to Munro (2005), a tolerance of less than 0.20 and / or a Variance Inflation Factor (VIF) of 5 or greater indicates multicollinearity between variables

Table 5

Collinearity Statistics

	Tolerance	VIF
Role Ambiguity	.547	1.829
Role Conflict	.516	1.936
Role Overload	.483	2.070
Empowerment	.484	2.067

Dependent Variable Burnout

Hypothesis 5 stated that empowerment would moderate the effect of role ambiguity on burnout in new graduate nurses. A model to assess the impact of role ambiguity and empowerment was initially created. In the initial model, controlling for empowerment, role ambiguity did not have a significant impact on burnout ($b = -0.208$, $SE = 0.126$, $t = -1.647$, $p = .103$); however, empowerment, controlling for role ambiguity, was significant ($b = -0.162$, $SE = .041$, $t = -3.965$, $p = .000$); a one-unit change in empowerment would yield a 0.16 decrease in burnout score. The initial model explained 32% of the variance in burnout. An interaction term was created and entered to represent the interaction between the predictor, role ambiguity and the moderator, empowerment on the dependent variable, burnout (Cohen et al., 2003). In this model, neither the predictor nor the moderator variables were significant and furthermore, the interaction term was also not significant. The addition of the interaction term did not explain any more variance (33%) than the previous model. Since the joint relationship of the two independent variables did not account for statistically significant

variance in the dependent variable, there was no support for the hypothesis of the moderating effect of empowerment (Bennet, 2000).

Table 6.

Regression Model: Role Ambiguity, Empowerment

	Variables	b	Std. Error	t	p-value
Model 1	(Constant)	6.845	.605	11.310	.000
	Role Ambiguity	-.208	.126	- 1.647	.103
	Empowerment	-.162	.041	-3.965	.000
Model 2	(Constant)	5.560	2.122	2.620	.010
	Role Ambiguity	0.44	.418	.105	.917
	Empowerment	-0.79	.137	-.578	.565
	Role Ambiguity * Empowerment	-0.16	.025	-.632	.529

Dependent Variable Burnout

Hypothesis 6 stated that empowerment would moderate the effect of role conflict on burnout in new graduate nurses. In the initial model, controlling for empowerment, role conflict had a significant impact on burnout ($b = .526$, $SE = .102$, $t = 5.164$, $p = .000$) and empowerment, controlling for role conflict, also had a significant impact on burnout, ($b = -.097$, $SE = .036$, $t = -2.723$, $p = .008$). Here, a unit change in role conflict would yield approximately a half-point increase in burnout score and a unit change in empowerment would result in a decrease in burnout score of roughly 0.1. This model explains approximately 46% of the variance in burnout. An interaction term was created and entered to represent the interaction between the predictor, role conflict and the moderator, empowerment on the dependent variable, burnout. In this model, role conflict remained a significant predictor of burnout, controlling for empowerment and the interaction, but empowerment and the interaction term were not significant

predictors. The addition of the interaction term did not increase the amount of variance explained by the model. As such, the results from this interaction, did not support this hypothesis and the moderating effect of empowerment

Table 7.

Regression Model: Role Conflict, Empowerment

	Variables	b	Std. Error	t	p-value
Model 1	(Constant)	2.184	.983	2.221	.029
	Role Conflict	.526	.102	5.164	.000
	Empowerment	-.097	.036	-2.723	.008
Model 2	(Constant)	2.138	.998	2.142	.035
	Role Conflict	.514	.108	4.747	.000
	Empowerment	-.079	.066	-1.195	.236
	Role Conflict * Empowerment	-.002	.007	-.329	.743

Dependent Variable Burnout

Hypothesis 7 stated that empowerment would moderate the effect of role overload on burnout in new graduate nurses. A model to assess the impact of role overload and empowerment on burnout was created. The results indicated that controlling for empowerment, role overload had a significant impact on burnout ($b = -.153$, $SE = .028$, $t = -6.535$, $p = .000$) and empowerment, controlling for role overload also had a significant impact on burnout ($b = -0.067$, $SE = 0.032$, $t = -2.083$, $p = .04$). In this model, a unit change in role overload would lead to a .15 decrease in burnout score and a one unit change in empowerment would lead to a .07 decrease in burnout score. This model explained 53% of the variance in burnout. An interaction term was created and entered into the model to represent the interaction between the predictor, role overload and the moderator,

empowerment on the dependent variable, burnout. In this model, role overload remained significant, although less so, but empowerment was no longer significant; the interaction term was also not a significant predictor. The addition of the interaction term did not increase the amount of variance in burnout explained by the model. The results from this interaction did not support the hypothesis of the moderating effect of empowerment.

Table 8.

Regression Model: Role Overload, Empowerment

	Variables	b	Std. Error	t	p-value
Model 1	(Constant)	6.668	.470	14.201	.000
	Role Overload	-.153	.028	-6.535	.000
	Empowerment	-.067	.032	-2.083	.040
Model 2	(Constant)	7.140	1.124	6.351	.000
	Role Overload	-.185	.073	-2.532	.013
	Empowerment	-0.94	.066	-1.421	.159
	Role Overload * Empowerment	.002	.004	.463	.645

Dependent Variable Burnout

In summary, Hypotheses 1, 2, 3 and 4 were supported in bivariate correlational analyses. However, the moderating effect of empowerment on burnout among those nurses experiencing role stress as stated in Hypothesis 5, 6 and 7 was not found to be significant. .

Additional Findings

Correlational analysis was conducted to examine the relationship between each aspect of empowerment (opportunity, support, information, resources, formal power and informal power) and burnout. The results indicated that except for opportunity, all aspects of empowerment were significantly correlated to burnout. The strongest correlation was between access to resources ($r = -.649$, $p = .000$) and burnout.

Table 9.

Correlation between Structural Empowerment and Burnout

Variable	1. Opportunity	2. Support	3. Information	4. Resources	5. Formal Power	6. Informal Power
Burnout	-.002	-.304 ***	-.356***	-.649***	-.551***	-.233*

*Correlation is significant at the .05 level (2 tailed); ** Correlation is significant at the .01 level (2 tailed)

***Correlation is significant at the .001 level (2 tailed).

Additional testing was conducted to examine the differences in mean levels of burnout scores by the following demographic variables: Magnet status, shift and gender. The results indicated that there were no significant differences in burnout scores for nurses working in magnet hospitals ($t = -.213, p = .36, df = 103$); magnet hospital ($n = 10$), non-magnet ($n = 95$). No significant differences in burnout were identified based on shift ($t = 1.56, p = .68, df = 102$); day ($n = 44$), night ($n = 60$) and there were no significant difference in burnout noted related to gender ($t = 1.374, p = .71, DF = 105$); male ($n = 17$), female ($n = 90$).

Chapter V. Discussion of the Findings

The purpose of this research was to examine the relationships among role stress, empowerment and burnout in new graduate nurses with two years of experience or less working in acute care facilities. In this chapter, there is an interpretation of the findings of the hypothesized relationships and a discussion with regard to the theories on burnout (Maslach and Jackson, 1986) role stress (Kahn et al., 1964), and empowerment (Laschinger et al., 2001) from which these hypotheses originated. In addition, recent empirical studies that support the hypothesized relationships are discussed.

Burnout

Theorists posit that burnout occurs in health care professionals from the emotional depletion that develops from working intimately with people and assisting them with their emotional, social and physical problems (Freudenberger, 1974; Maslach, 1976). Cherniss (1980) studied the prevalence of early career burnout in new graduates linking its development to professional self-efficacy or the desire to achieve competence in one's professional role.

Maslach and Leiter (1997) continued to expand the research on burnout and wrote about the theory of job- person mismatch. The authors used this theoretical framework to integrate both individual and organizational factors when discussing burnout; they identified six specific aspects of the work environment in which mismatch can occur. These were identified as work overload, lack of control, insufficient reward, breakdown of community, absence of fairness and value conflict. Chronic mismatches in some or all of these aspects of the work environment were identified as antecedents to burnout.

New graduate nurses are susceptible to burnout since they have recently been introduced to the health care profession and work in environments that have increased workloads, high job dissatisfaction, poor retention and high levels of burnout (Aiken et al., 2001; Aiken et al., 2002; Poghosyan, Clarke, Finlayson & Aiken, 2010; Garrosa et al., 2011; Aiken, et al., 2011; Kanai-Pak et al., 2008). In this study, 45 % of new graduate nurses reported high burnout levels; 30 % reported moderate levels and 24 % reported low levels of burnout. These findings are consistent with the high burnout rates reported in the empirical literature for new graduate nurses, 66 % reported by Cho et al.(2006), 62% reported by Laschinger, Finegan and Wilk, (2009) and 40% reported by Laschinger and Grau, (2012). The high burnout rates obtained in this study are a significant addition to the literature since this was the first study conducted that examined burnout in new graduate nurses working in the U.S. health care system. Research on burnout in new graduate nurses has been conducted in other countries such as Sweden (Rudman & Gustavson, 2011; Rudman, Gustavson & Hultell, 2014), Canada (Cho, et al 2006; Laschinger, 2012) and Japan (Ishihara, Ishibashi, Takahashi & Nakashima, 2014) where nurses work in different health care systems.

Although previous research has indicated that the transition period for new graduates into their professional role as a registered nurse is stressful and a pivotal time, no research on burnout in new graduates conducted in the United States has been found in the literature. It is significant for the future of nursing in the United States that new graduates are reporting these moderate to high levels of burnout, both in the study reported here and the empirical literature from other countries. Burnout has been associated with intent to leave the profession (Rudman & Gustavsson, 2011; 2012);

intent to leave one's current job (Lashinger, Grau, Finegan & Wilk, 2012); decreased patient satisfaction (Aiken et al., 2002); patient mortality (Aiken et al., 2008); health care associated infections (Cimiotti, Aiken, Sloane & Wu, 2012); and, health problems for the individual nurse (Peterson et al., 2008).

Role Stress and Burnout

Kahn et al. (1964) identified the components of role stress as role ambiguity, role conflict and role overload. Kramer (1974) and Hardy and Conway (1988) examined role stress among health care professionals and the impact of the health care environment on the individual. Role ambiguity develops from lack of clarity about a particular role and uncertainty about what measures are necessary to accomplish the requirements of the role. Role conflict develops when existing role expectations are interpreted by an individual as conflicting or contradictory. Role overload results from excessive workload which occurs when a person's time and resources are insufficient to meet the responsibilities of a particular role (Kahn et al., 1964; Hardy & Conway, 1988). The results of the study on new graduate nurses reported here indicated a significant positive relationship between each of the three role stress components and burnout, which is consistent with the literature (Peiro et al., 2001; Ortqvist & Wincent, 2006; Lee & Ashforth, 1996). Although all three components had a positive relationship with burnout, role conflict and role overload had the highest correlations and were more prevalent in this sample. A meta-analysis of the consequences of role stress conducted by Ortqvist and Wincent (2006) demonstrated that all three components of role stress were positively and significantly correlated with burnout; with role overload and role ambiguity having the strongest relationship with burnout. The authors of this

meta-analysis concluded that future research on the concept of role stress and its consequences should continue to examine each component of role stress separately to ascertain the impact of each variable.

New graduate nurses in the study reported here experienced low levels of role ambiguity which indicated that they were clear about their roles and responsibilities and high levels of role conflict which indicated a work environment with negative interpersonal relationships (Leiter and Maslach, 1988). These findings were supported in the literature by Lee et al., (2003) in Korea and Tunc and Kutanis (2009) in Turkey, who conducted similar research using a sample of nurses with various levels of experience. Both researchers used the Rizzo Role Conflict / Role Ambiguity Scales (Rizzo et al, 1972) and the MBI (Maslach et al, 1996). In the study reported here, new graduate nurses also reported high levels of role overload. The results of the study indicated that all three role stress variables were significantly correlated with burnout; however, role conflict and role overload demonstrated the highest correlations. Peiro et al. (2001) obtained similar results in a longitudinal study examining role stress and burnout among health care professionals.

The only role stress research conducted on a sample of new graduate nurses was done by Chang and Hancock (2003), however, a different instrument from the one used in the study reported here was used to measure role stress. In their longitudinal study, the authors conducted a factor analysis of role stress during a new graduate's first year as a professional nurse. The authors identified role ambiguity as the most significant characteristic of role stress during the new graduates' first three months of employment,

with role overload the most significant factor explaining role stress when this sample was surveyed about ten months later.

In the study reported here, role overload was reported by 40 % of the new graduate nurses and was significantly correlated with burnout, as supported in the literature (Peiro et al., 2001; Wu et al., 2006). Research conducted by Spooner-Lane and Patton (2007) reported a similar significant relationship and found a higher incidence of burnout among younger nurses. In Canada, Laschinger and Grau (2012) conducted research on new graduates in their first year of practice and reported that 40% of nurses in their study reported high levels of burnout and high workloads.

Role overload and burnout have been associated with patient safety (Laschinger & Leiter, 2006; Teng et al., 2010). Since patient safety has been the major focus of health care organizations from the time when the Institute of Medicine's report (1999) disclosed the alarming rate of medical related errors, there is a moral imperative to identify the presence of these variables and intervene to decrease their occurrence. The results of the study reported here are a significant addition to the literature since this is the only research conducted on new graduates in the United States demonstrating that new graduate nurses experienced high workloads and high burnout levels. By addressing this gap, this study provides an initial platform for future research to determine the prevalence and magnitude of role overload and burnout among new graduate nurses in the United States.

In summary, Hypotheses 1 through 3 which were supported in this study, were consistent with the literature and provided new data to support the prevalence of these

hypothesized relationships in the United States among new graduate nurses working in acute care facilities.

Empowerment and Burnout

Rosabeth Kanter's structural theory of organizational behavior (1993) explained the concept of empowerment in the workplace. Kanter's theory of structural power in organizations (1993) proposed that individuals feel empowered when they perceive that their work environment provides access to support, information, resources and opportunity. Individuals that experience empowerment were less likely to develop burnout; whereas individuals that do not feel empowered were more likely to experience burnout (Kanter & Brown, 1982). Hatcher and Laschinger (1996) began their research on empowerment using the CWEQ-II and identified in their first study that nurses who worked in an empowered environment had low levels of burnout. Subsequent research supported this inverse relationship in samples of all nurses (Laschinger, Finnegan, Shamian & Wilk, 2003; Sarmiento et al., 2004; Laschinger et al., 2009; Harwood et al., 2010; O'Brien, 2011) and samples of new graduate nurses (Cho et al., 2006; Laschinger, Finnegan & Wilk, 2009).

The results of the study reported here indicated a significant inverse relationship between empowerment and burnout ($r = -.55$, $p = .000$) which supported the hypothesized relationship. These findings were similar to those obtained by Cho et al. (2006) in Canada, ($r = -.27$, $p = \leq .01$) which was the first study designed to test Kanter's theory of empowerment in new graduate nurses. In the Canadian study, new graduate nurses reported moderate levels of empowerment, with 66% reporting high levels of burnout.

The study reported here is the only study that has tested the relationship between empowerment and burnout in a sample of new graduate nurses working in an acute care environment in the United States. The results are significant and are supported by the literature and theoretical propositions. Although these variables have been tested in Canada since 2006 and have been associated with organizational commitment, retention, health outcomes for the new graduate (Cho et al., 2006; Laschinger et al., 2009; Laschinger & Grau, 2012), no studies conducted in the United States on this population were found in the literature.

Role Stress, Empowerment and Burnout

Only one other study, which was conducted in Korea, examined role stress, empowerment and burnout (Lee et al., 2003) and the results were similar to those obtained in the study reported here. The participants in the study by Lee et al. (2003) were all female, with a mean age of 30; half of the participants had less than six years of experience as a nurse. In the study by Lee et al. (2003), respondents reported high levels of burnout, role overload and role conflict; low levels of role ambiguity; and, moderate levels of empowerment. All three role stress variables had a significant positive correlation with burnout and empowerment had a significant inverse correlation with burnout. The instruments used were the MBI (Maslach, Schaufeli & Letier, 1996), the Rizzo Role Ambiguity and Role Conflict Scale (Rizzo et al., 1972) and the Global Empowerment Scale (Hatcher & Laschinger, 1996).

The results of the study reported here, which was supported by both theory and the empirical literature, provides a significant contribution to the body of knowledge on the topic of burnout among new graduate nurses. This research, the first conducted in the

United States on this population, revealed the experience of new graduates in the U.S. health care system. It provides important data for health care organizations to utilize when assessing organizational outcomes.

Moderator Role of Empowerment

Researchers have identified the inverse relationship between empowerment and burnout (Laschinger et al., 2003; Sarmiento et al., 2004; Harwood et al., 2010; O'Brien, 2011), and in samples of new graduate nurses (Cho et al., 2006; Laschinger et al., 2009). In addition, researchers have also identified a positive correlation between role stress and burnout in experienced health care professionals (Peiro et al., 2001; Ortqvist & Wincent, 2006; Lee et al., 2003) and new graduate nurses (Chang & Hancock, 2003). Based on these relationships, it was hypothesized in the study reported here that empowerment would moderate the relationship between role stress and burnout in new graduate nurses. Hochwalder (2007) conducted a study to examine the main effect of empowerment on burnout, as well as the mediating and moderating effects of empowerment between the psychosocial work environment and burnout. The study by Hochwalder (2007) was conducted on a sample of registered nurses and nursing assistants (n = 908). The instrument used to measure the psychosocial work environment was a scale developed by Karasek and Theorell (1990) that measured three aspects of the work environment: demand, control and social support. Empowerment was measured using Spreitzer's Psychological Empowerment Scale (1995) which measured four aspects of the work environment such as meaning, competence, self-determination and impact. Burnout was measured with the MBI. Hochwalder (2007) identified a significant moderator effect of empowerment on the association between the

psychosocial work environment variables (demand, control and social support) and burnout which accounted for an additional 1 % of the variance. In the study, nurses with high empowerment scores had lower levels of burnout compared to those with low empowerment scores; an increase in demands was associated with a smaller increase in burnout among nurses with high empowerment scores as compared to those with low empowerment scores. In their meta-analysis, Ortqvist and Wincent (2006) discussed the importance of future research to examine potential moderators of the relationships between the role stress variables and some of their consequences, such as burnout. Based on the above, the moderation model was developed.

Hypotheses 5, 6 and 7 tested the moderating effect of empowerment on each role stress variable and burnout. The results obtained in the study reported here did not support this moderation model. The coefficients for the interaction term that was created to test this moderation model were not significant and the joint relationship of the two independent variables did not account for a statistically significant variance in the dependent variable (Bennett, 2000). The lack of support for this moderation model could have been affected by the fact that only 10% of the sample reported high levels of empowerment with 45% having reported high levels of burnout. In the research conducted by Hochwalder (2007), the moderation model was supported in a sample of experienced nurses who reported high levels of empowerment. The moderation model of empowerment may not be applicable to a small sample of new graduate nurses who are inexperienced in their professional role. The moderation model investigated by Hochwalder (2007) tested empowerment with Spreitzer's Psychological Empowerment

Scale which differed from the study reported here which tested empowerment using the CWEQ – II to examine structural empowerment.

Hochwalder (2007) found support for the moderating role of empowerment between the psychosocial work environment and burnout. The study reported here examined the moderating role of empowerment between three role stress variables and burnout. The lack of support for this moderation model might have been due to the high and strong correlations between empowerment and the role stress variables: role overload ($r = .583, p = .000$), role ambiguity ($r = .601, p = .000$) and role conflict ($r = -.567, p = .000$).

In summary, despite strong directional correlations between each independent variable and the dependent variable, the hypothesized moderation model was not supported. However, this study contributed to the body of knowledge on this topic by testing the hypothesis that structural empowerment could moderate the relationship between role stress and burnout in newly graduated nurses. There were no prior studies that tested this moderation model in any population.

Additional Findings

Additional analyses were conducted to determine the relationship between each aspect of empowerment and burnout. The strongest correlation was between access to resources and burnout ($r = -.649, p = .000$). This correlation has been supported in the literature by Maslach and Leiter (1997) who posit, in their theoretical framework of job-person mismatch, that burnout is strongly related to not having enough time and resources to do a job. Cho et al. (2006) in their research on new graduate nurses examined the relationship between each aspect of empowerment and burnout

and also reported the strongest correlation between access to resources and burnout ($r = -.38, p \leq .01$).

Additional testing was conducted to examine the difference in mean levels of burnout scores using the following demographic variables: magnet status, shift and gender. The results indicated that there were no significant differences in burnout scores for nurses working in magnet hospitals ($n=10$) versus non-magnet hospitals ($n= 95$) ($t = -.213, p= .36, df 103$). These results are not consistent with a recent study that found nurses working in magnet hospitals were 13% less likely to report high levels of burnout (Kelly, McHugh & Aiken, 2011). The lack of significant differences in the burnout scores and the inconsistency with the literature can be attributed to the difference in the sample size with only a small number of participants working in a magnet hospital. No significant differences in burnout were identified based on working day shift ($n=44$) versus night shift (60) ($t= 1.56, p= .68, df, 102$); there was no research found in the literature comparing shift work and burnout (West, Ahem, Byrnes & Kwartan, 2007). No significant difference in burnout was noted related to male ($n = 17$) versus female ($n= 90$) gender ($t= 1.374, p = .71, df 105$), which could be attributed to unequal sample sizes. However, these findings are consistent with those obtained in a much larger study in Nigeria, with almost equal sample sizes: male ($n = 1,129$), female ($n= 1,116$), which identified no difference in burnout scores based on gender (Gandi, Wai, Karick & Dagona, 2011).

Chapter VI. Summary, Limitations, Conclusions, Implications and Recommendations

Summary

This study was conducted to examine the relationships among role stress, empowerment and burnout in new graduate nurses with two years of experience or less working in acute care facilities. The hypotheses were derived from the following theorists and the empirical literature. Based on the theory of role stress (Kahn et al., 1964), three independent variables were examined: role ambiguity, role conflict and role overload. The independent variable, empowerment, was derived from the theory of Rosabeth Kanter (1977) and Laschinger (2001). Burnout was derived from the theorists Fruedenberger (1974) who first coined the term burnout and Maslach (1976) who identified the three components; emotional exhaustion, depersonalization and decreased personal accomplishment.

Kahn (1964) described role stress as having three components: role ambiguity, role conflict and role overload. The relationships among these three independent variables and burnout were examined. Role ambiguity was defined as an individual not knowing what is expected within a certain role. Role conflict was defined as two or more sets of pressures occurring at the same time, in which compliance with one does not allow compliance with the other. Role overload was defined as an individual being unable to complete the requirements of a particular role within a specific time frame (Kahn, 1964). Researchers have identified the positive correlation of all three components of role stress with either one dimension (emotional exhaustion) or all three dimensions of burnout (Ortqvist & Wincent, 2006; Lee et al., 2003; Peiro et al., 2001).

Empowerment, an independent variable in this study, was conceptualized by Kanter (1993) and Laschinger (2001) as occurring when an individual perceives that the work environment provides access to support, information, resources and opportunity. Individuals that do not have access to these experience powerlessness (Kanter, 1993). Powerless individuals are more susceptible to burnout (Kanter, 1993). Nurses who have high levels of empowerment, report low levels of burnout (Laschinger & Hatcher, 1999; Cho et al., 2008; Laschinger et al., 2009).

Burnout, the dependent variable was defined as a multi-dimensional syndrome with three components; emotional exhaustion, depersonalization and decreased personal accomplishment (Maslach & Jackson, 1986). The emotional exhaustion component is directly related to chronic stress in a job and has been described as the core component of burnout (Cox et al., 1993; Maslach et al., 2001).

In this study, all three role stress variables had strong positive correlations with burnout. New graduate nurses reported high levels of role conflict and role overload with low levels of role ambiguity. Role conflict and role overload had the highest correlation with burnout, which is consistent with the literature (Ortqvist & Wincent, 2006; Peiro et al., 2001). Forty five percent of the new graduates in this study reported experiencing high levels of burnout and 30 % reported moderate levels of burnout. Only 10 % of nurses reported high levels of empowerment and 79.7 % reported moderate levels of empowerment.

The following hypotheses were derived for this study from the theoretical and empirical literature.

1. Role ambiguity is positively related to burnout in new graduate nurses
2. Role conflict is positively related to burnout in new graduate nurses.
3. Role overload is positively related to burnout in new graduate nurses
4. Empowerment is inversely related to burnout in new graduate nurses
5. Empowerment moderates the effect of role ambiguity on burnout
in new graduate nurses
6. Empowerment moderates the effect of role conflict on burnout
in new graduate nurses
7. Empowerment moderates the effect of role overload on burnout
in new graduate nurses

New graduate nurses, who were members of the New York State Nurses Association, were recruited via email and requested to respond to an online questionnaire using Survey Monkey. The sample population consisted of 107 new graduate nurses working in an acute care facility. The majority of the participants were female, less than 40 years of age, with a Bachelor of Science degree in nursing.

Role stress was measured using the Role Ambiguity and Role Conflict Scale (Rizzo et al, 1970), role overload was measured using the Individual Workload Perception Scale –Revised (Cox et.al, 2010) and empowerment was measured with the Conditions of Work Environment Questionnaire-II (Laschinger, Finegan, Shamian, & Wilk, 2001). The Maslach Burnout Inventory – Human Services Survey (Maslach, Jackson & Leiter,

1996) was used to measure burnout. In this study, the alpha coefficients obtained for these instruments ranged from 0.81 to 0.93. Data were entered into the Statistical Package for the Social Sciences (SPSS 21.0). Hypotheses 1 through 4 were tested using Pearson's product-moment correlational analysis. Hypotheses 5 through 7 which represented the moderation model were tested using multiple regression. The significance level used for hypothesis testing was set at .05. Hypotheses 1 through 4 were supported. The moderation model, represented by hypotheses 5 through 7 was not supported.

In summary, the independent variables, role stress and empowerment had significant correlations with burnout, findings are supported by both theory and the empirical literature. Although there is theoretical and empirical support for empowerment as a moderator of the association between the work environment and burnout (Hochwalder, 2007), the results from this study did not support the hypotheses that empowerment moderated the effect of role stress variables on burnout in new graduate nurses.

Limitations

1. Self-report measures were used. Self-reporting has been associated with response bias whereby participants might be inclined to respond with what they think is a more socially appropriate answer to a question (Podsakoff, MacKenzie, & Podsakoff, 2003).
2. Survey was sent to all members of NYSNA and a screening page was used to exclude nurses with more than 2 years of experience from the study. Once again, self-reporting was used to verify eligibility.

3. This study was conducted only on a small sample of members of a professional and labor organization for nurses in New York State which decreases the generalizability of the findings.
4. Other variables may have influenced these findings either related to the work environment or characteristics of the individual nurse.

Conclusions

The following conclusions were drawn from this study of new graduate nurses working in acute care hospitals:

1. Role conflict and role overload which had the highest correlation with burnout and were the most prevalent among this sample population can be addressed by organizations. Role conflict can be addressed by nurse managers being educated about their critical role in providing an environment for new graduate nurses that ensures they receive the appropriate support and mentoring as they transition into their professional role (Rheume, Clement and Le Bel, 2011). An analysis of the nurse's workload and the imbalance of the time pressure allocation for tasks can be undertaken to identify the aspects of the work that may be redesigned to reduce role overload and decrease the incidence of burnout (Laschinger, Grau, Finnegan & Wilk, 2012). Non-nursing tasks can be reassigned to other personnel and appropriate resources must be provided that allow nurses to practice according to professional standards (Laschinger et al, 2009).
2. As discussed in theory, an empowering work environment was inversely related to the development of burnout. The majority of new graduate nurses reported only moderate levels of empowerment. The work environment could become

more empowering for new graduates by providing better access to support, information, opportunity and especially resources which allow a new graduate nurse to work in a supportive professional environment which is congruent with the professional standards learned in their undergraduate education (Laschinger et al. 2009).

3. Consistent with the empirical literature, but not previously tested in the United States, 75 % of new graduate nurses in the United States, experienced moderate to high levels of burnout which can negatively impact the nurse, the profession and patient care. This high rate of burnout can be a contributing factor to the high turnover rate of new graduate nurses that is being reported in the literature (Laschinger, 2012; Rudman, Gustavsson & Hultell, 2014). Laschinger (2012) discusses the importance of empowerment and burnout as predictors of job and career satisfaction and turnover intentions of new graduate nurses within their first two years of working. Therefore, it is important for hospitals to identify and track the presence of negative working conditions and burnout levels of new graduates working in their organization. This could be done via surveys at the beginning of employment, during the orientation process and a few months after completing orientation. A negative work environment can be modified to enhance empowerment, decrease burnout and directly impact retention in an organization as well as the profession (Griffen, 2005; Scott et al, 2008).
4. With the majority of new graduate nurses reporting high levels of role conflict and role overload, low levels of role ambiguity, high levels of burnout and only

moderate levels of empowerment, the moderating effect of empowerment was not supported. The empowerment scores may not have been high enough to moderate the interaction between the three role stress variables and burnout. Laschinger, Wong and Grau (2013) identified in their research that experienced nurses were better able than new graduate nurses to utilize the components of empowering work structures due to their knowledge and experience. Since the study reported here was conducted on a sample of new graduate nurses, this may have affected the moderating effect of empowerment on burnout.

Implications for Nursing

Role stress has been correlated with a negative work environment and the development of burnout (Lee et al., 2003). Maslach and Leiter (1997) have linked work environments where nurses experience high levels of role overload and role conflict to burnout. Nurses that reported high levels of structural empowerment work in empowering organizations which have been identified as having a positive impact on the employee (Kanter, 1993). A disempowering work environment has been associated with higher levels of burnout (Cho et al., 2006). The work environment impacts a nurse's job satisfaction, level of burnout and their intent to leave their current job as well as the profession (Aiken et al., 2002; Laschinger & Grau, 2012; Von Bogaert et al., 2014; Laschinger, 2012; Rheaume, Clement & LeBel, 2011) which eventually has a negative impact on the organization and the profession (Rudman, Gustavson & Hultell, 2014)

In this study, 75% of new graduate nurses reported moderate to high levels of burnout. This high rate of burnout has ethical and financial implications. According to a report issued by the American Association of Colleges of Nursing (AACN) for 2013-

2014, 78,000 qualified undergraduate and graduate applicants were not accepted into nursing programs throughout the country due to insufficient number of faculty, limited clinical sites, lack of classroom space and other economic issues (www.aacn.org).

Burnout in new graduate nurses has been associated with intent to leave either their job (Laschinger, Grau, Finegan & Wilk, 2012) or the profession ((Rudman & Gustavsson, 2011; 2012). When new graduate nurses leave the profession, educational resources have been squandered both at the preparatory and professional level and this exodus compounds the nursing shortage.

When a new graduate nurse leaves an organization after only one to two years of employment, the organization has no return on their investment. Educators and staff have provided resources to orient the new graduate to the various aspects of their professional role. This orientation process is arduous for the nursing staff who, in addition to their high workloads, precept new graduate nurse, expending their time and energy, with a negative outcome when the new graduate leaves the organization. High burnout rates among new graduates can create a revolving door environment caused by a high turnover on a nursing unit. Although every organization provides a structured orientation for new graduates, there is no standardized transition process. Missen, McKenna and Beauchamp (2014) found that orientation for a new graduate nurse can vary from a few weeks to one year and these authors suggest that additional research is needed to identify the ideal length and the appropriate pedagogy for a transition to practice program for a new graduate nurse. Previous researchers have identified that newly graduated nurses need at least one year to feel secure in their new role (Dyess & Sherman, 2009; Kowalski & Cross, 2010; Nematollahi & Isaac, 2012). In the

study reported here, 82% of the participants had an orientation that was 3 months or less. Although the orientation or transition process was not examined in this study, a recent review paper discussed the correlation between transition to practice programs (orientation) and retention rates of new graduate nurses (Missen et al., 2014). Transition programs have been associated with intent to leave (Missen et al., 2014), intent to leave has been associated with burnout (Laschinger, 2012; Rudman, Gustavson & Hultell, 2014) and new graduate nurses in the study reported here and in the literature from other countries are experiencing burnout (Cho et al., 2006; Gustavson, Hallstenn & Rudman, 2010; Rudman et al., 2014). Therefore, it could be hypothesized that the high levels of burnout reported among new graduate nurses are related to transition to practice programs. Future research is needed to examine the correlation between burnout and transition to practice programs for new graduate nurses.

Burnout has also been associated with patient mortality and failure to rescue (Aiken et al., 2002; Aiken, Clarke, Sloan, Lake & Cheney, 2008; Van Bogaert et al., 2014), as well as healthcare associated infections (Cimiotti et al., 2012), which negatively impact both the organization and the patient. Data from the Healthcare Associated Infection Prevalence Survey, conducted by the CDC, indicated that one in 25 hospital patients sustained this type of infection (www.cdc.gov). In 2011, there were 772,000 healthcare associated infections reported by acute care facilities, across 10 states, from various regions, which resulted in approximately 75,000 deaths (Magill, Edwards & Bamberg et al., 2014). The correlation between burnout and healthcare associated infections demands further research due to the enormous impact that these infections have on the cost of health care (Cosgrove et al., 2005).

In summary, with the moderate to high burnout rates noted among new graduate nurses in this study, it is essential for health care organizations to examine and, if necessary, improve their work environments. It may be less costly for hospitals to implement strategies to decrease burnout among employees, such as establishment of an empowering work environment, elimination of role ambiguity, prevention of role conflict and reduction of role overload that are supported in the literature, and have been discussed, rather than absorb the costly financial impact of burnout. The moderate to high levels of burnout among new graduate nurses is a major concern. Burnout is associated with absenteeism and attrition which can affect staffing levels, impact the quality of patient care (Laschinger & Grau, 2012; Rudman & Gustavsson, 2012) and destabilize the current nursing workforce. In the Bureau of Labor Statistics report (2013) it was projected that the total number of job openings for nurses will reach one million by 2022 due to the increases in demand for nurses and replacements of those who leave or retire from the profession (www.bls.gov/new.release/ecopro.to8.htm) Therefore, it is essential to assess and, if necessary, improve the work environment of nurses and strategize how to retain as many new graduate nurses as possible to meet this projection.

Laschinger and Grau (2012) discuss the importance of organizations fostering a conflict free environment and creating an empowering work environment to decrease the prevalence of burnout among new graduate nurses. Organizations should promote a work environment for new graduate nurses that has access to resources, information, support and opportunity (Laschinger, 2012) which will have a positive impact on the new graduate nurses' physical and mental health and enhance their transition into their professional role (Laschinger & Grau, 2012).

In the study reported here, only 10% of new graduate nurses reported high empowerment scores. Since nurses working in an empowering organization have lower levels of burnout and burnout affects retention, there is an economic benefit to promoting this type of work environment. With the association between burnout and negative patient outcomes (Aiken et al, 2002; Cimiotti et al., 2012) there is also a moral imperative to reduce burnout and improve the delivery of health care to patients. It is important for organizations to identify the prevalence of burnout due to the financial and moral impact of burnout on the nurse, the organization and the patient.

Recommendation for Future Research

This study could be repeated and include new graduate nurses from other geographical areas who are not members of a collective bargaining organization which would enhance the generalizability of the research.

The following questions are proposed for future research.

1. Does ethnicity or race influence the development of burnout? This variable was not researched in this study.
2. What is the relationship between new graduate transitional programs (nurse residency, orientation and mentoring programs), role stress and burnout?

New graduates experience transition shock which includes role stress (Kramer, 1972). This occurs when the move from their familiar environment as a student into their professional role. Transition programs may mitigate reality shock by introducing new graduate nurses into their new role gradually over time, preventing them from being placed in a situation that is above their level of expertise and offering additional support such as

mentoring (Duchscher, 2009). Some researchers have supported extending the length of a transition program for new graduates to 12 months (Dyess & Sherman, 2009; Kowalski & Cross, 2010; Nematollahi & Isaac, 2012).

3. Do characteristics of an individual, such as, psychological capital (self-efficacy, hope, optimism and resilience), identified by Luthens et al., (2004) mediate the relationship between role stress and burnout in new graduate nurses?

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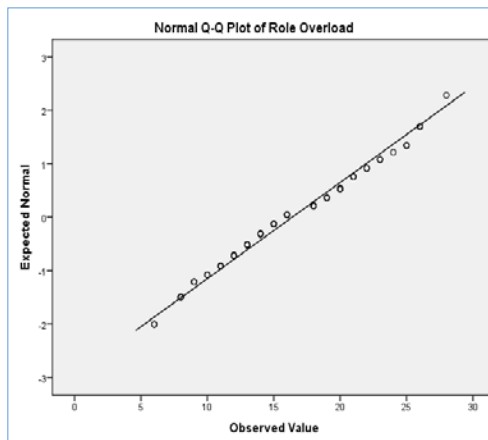
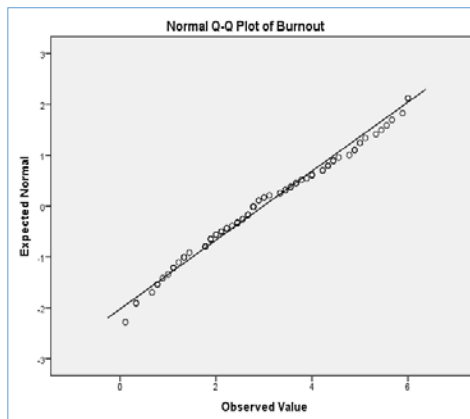
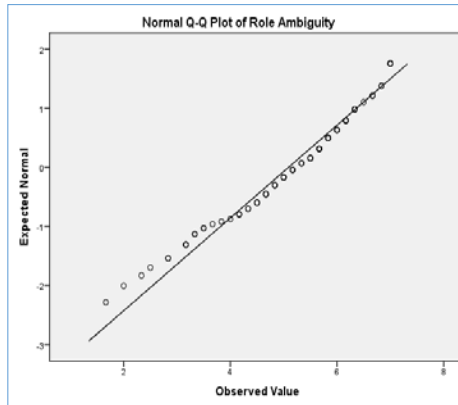
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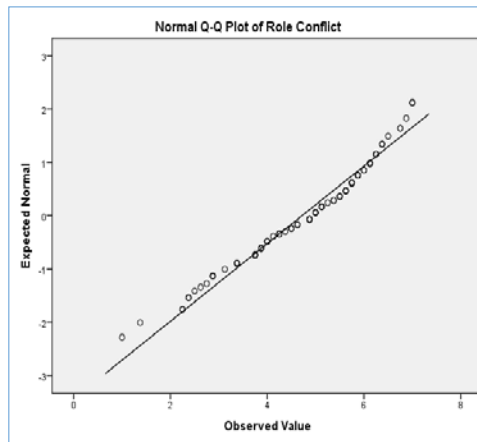
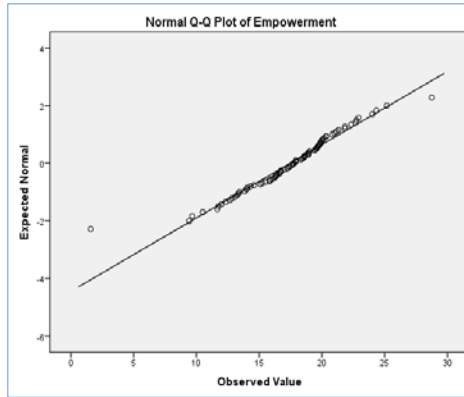
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Appendix A

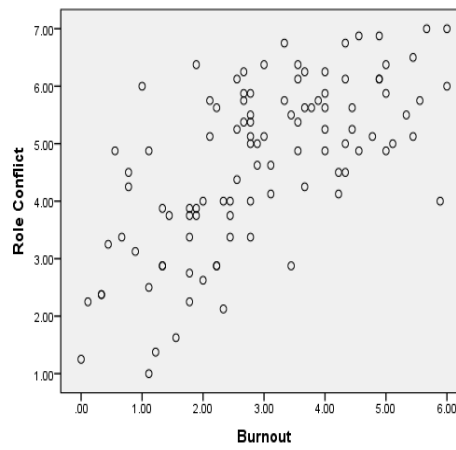
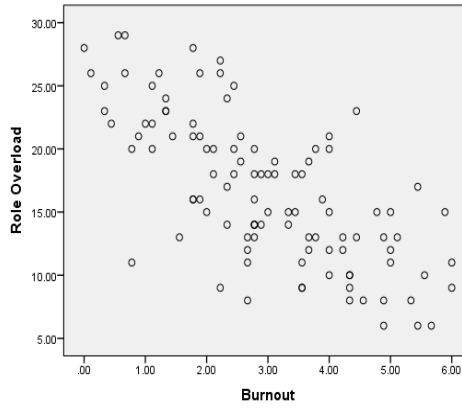
Scatterplots Representing Linear relationships

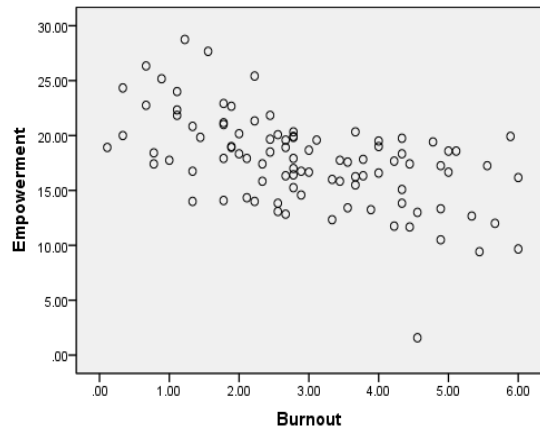
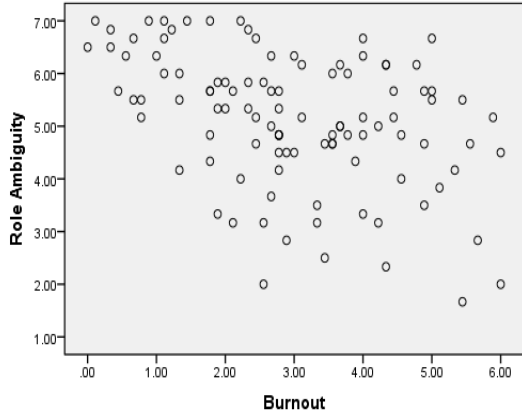




Appendix B

Scatterplots of the Standardized Residuals





Appendix C

Permission and Proof of Purchase for the Maslach Burnout Inventory (MBI-HSS). This instrument was purchased from the company, Mind Garden. June 21, 2013.

Your Mind Garden order is ready on Transform.
From MindGarden, Inc. invite@mindgarden.comhide details
To Frances Iacobellis fiacobel@pegasus.rutgers.edu

Dear Frances Iacobellis,

Welcome to Transform, a web-based document storage system by Mind Garden, Inc. (www.mindgarden.com).

Your order for MBI-B may be found on your Participant page after you log in.

You will need to establish your identity (login) in Transform (if you haven't already done so). For this process, your User ID will be your email address; you will set your own password. To begin the login process, click on the following link:

<http://www.mindgarden.com/login/236858/231606>

You may need to copy and paste this URL into your web browser if clicking on the URL does not work.

Once you get to your page, you can see your order added to the Documents page.

To return to Transform at any time, simply enter your e-mail address and the password you created to log back in. <http://www.mindgarden.com/login/236858/231606>

Your email address is: fiacobel@pegasus.rutgers.edu

As always, we are available weekdays (US) to answer any questions you may have. Reach us by email by going to the "Contact" link on our website <http://www.mindgarden.com/contact.htm>, or call us at 650-322-6300 (US Pacific).

Sincerely,

The Mind Garden Team