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Exploring the Relationships among Work-Related Stress, Quality of Life, Job Satisfaction, and Anticipated Turnover on Nursing Units with Clinical Nurse Leaders

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Exploring the Relationships among Work-Related Stress, Quality of Life, Job Satisfaction, and Anticipated Turnover on Nursing Units with Clinical Nurse Leaders

by

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Abstract

The purpose of this study was to explore the relationship of the Clinical Nurse Leader (CNL) (AACN) role with the variables of work related stress, quality of life, job satisfaction and anticipated turnover of acute care nurses. Participants included registered nurses (RNs) (N= 94) in Florida recruited from 3 (not for profit) Magnet hospitals in the Tampa Bay Florida area. An ex post facto design was used to test the hypotheses of this study; independent t-tests compared RN's responses on survey tools measuring work-related stress, quality of life, job satisfaction, and anticipated turnover. Multiple regression analysis was used to examine the interrelationships among these variables. RNs (N=94) completed five survey instruments, including a researcher-developed demographic form. The results of the study showed Aim1 which explored work- related stress did not show any statistical difference between the two groups. Aim 2 which explored job satisfaction and quality of life did not show a difference in the two groups when total scores were analyzed. However, the mental health subscale of the Sf-36(quality of life) was significant (p=.021), and the general health subscale of the Sf-36 trended toward the CNL group reporting better general health (p=.080). This study revealed that Aim 3 which explored anticipated turnover was statistically significant (p=.047). Standard multiple regression showed a significant relationship existed between CNLs, work related stress and anticipated turnover. The significance of implementation of the CNL role in decreasing turnover through a relationship with these variables may have an important impact on the nursing profession. Specifically, economic implications

in reducing turnover that bear further exploration and improving the nursing work environment. This research is the first study to explore the CNL role in relation to these variables.

Chapter One

Introduction

Work-related stress, quality of life, and job satisfaction are the factors that greatly affect turnover for registered nurses (RNs) in the acute care setting. These variables have global implications. Further research is needed on the factors related to nurse turnover. This study explored the relationship between the Clinical Nurse Leader (CNL) role and work-related stress, quality of life, job satisfaction, and anticipated turnover of acute care nurses.

Work-Related Stress

Research on work related stress has been explored for over two decades and has been found to be a major factor related to nurse turnover. Rick and Perrewe (1995) define *work-related stress* as a conflict resulting from a disconnection between an individual's perception of the demands of the position and the ability or inability to meet those demands. Stickler (2009) found that the literature is extensive on the effects of the work environment on nurse's stress levels, collaborative practice, work load, job conflict, and job satisfaction and anticipated turnover. The effects of work-related stress are low job satisfaction, high turnover, and poor patient outcomes, resulting in large numbers of nurses leaving the profession entirely (Aiken, 2001; Hayes, 2005). Severe distress has been linked to staff absenteeism and even ill-health (Healy & McKay, 1999; McGowan, 2001; Shader et al., 2001). Several factors have been identified in relation to stress in acute care settings:(1) workload; (2) organizational support;(3) social support;(4)

autonomy;(5) relationships with colleagues; (6) communication; and (7) rewards (Attree, 2005; Begat, 2005; Boyle, 2004; Chang, 2006; Coffman, 2002; Fletcher, 2001;Geibert, 2006; Gray-Toft, 1985; Hall, 2004; Hayes, 1999; Khowaja,2004; Lambert, 2004; McNeely, 2005; McVicar, 2003; Reineck,2005; Oloffson 2003; Strader, 2001; Stichler, 2009; Sveinsdotter, 2005; Weyer, 2006; Zeytinoglu, 2005).

Nurses describe the first factor, workload, as resulting from inadequate resources and an inability to deliver high quality patient care. Specifically, they report that heavy workloads are caused by poor staffing ratios and high patient acuity (Fletcher, 2001). California is the only state that has enacted legislation to mandate staffing ratios. Although nurses' organizations and labor unions supported it, the mandate appears to have had mixed success (Coffman, Seago, & Spetz, 2002). Addressing unsatisfactory staffing ratios may reduce stress levels to some degree, but other workload factors may also be involved.

Inefficiencies in healthcare delivery also are reported to impact workload for the average nursing care provider. Nurses spend an inordinate amount of time documenting care, with many redundancies in the process (Reineick, 2005). One reported inefficiency is implementation of computer documentation related to patient safety. An unintended consequence of computerized documentation is an increased burden on nurses who take more time to document patient care with the new technology than with the former protocols. Nurses are often not provided with sufficient training and support during the equipment dissemination process and have little time to master the new technology while they practice nursing (Geibert, 2006). Therefore, efforts to increase efficiency through

the use of technology have often had the opposite, deleterious effect of increasing workload.

The second factor noted, a lack of organizational support in particular ancillary staff resulting in highly trained RNs providing care that could be safely provided by less educated, and thus less costly, caregivers (Khowaja, Merchant, & Hirani, 2004). Additionally, lack of organizational support occurs when nurse managers and directors do not exercise the necessary skills for leadership positions, the staff is left feeling that administration is unsupportive. In turn, lack of support leads to situations in which nurses are more likely to leave their positions (Fletcher; Zeytinoglu, 2005).

Third, the demands of nursing and a lack of social support seem to cause emotional exhaustion and increased stress levels (Janssen, 1999). Social support from colleagues decreases stress and positively affects job satisfaction (Begat, 2004). Nurses reported that strong social support helped them experienced less stress and have a higher level of job satisfaction; this in turn contributed to enhancing quality of patient care (AlArub, 2004). Nurses believed that their psychosocial work environment improved when they were able to discuss their problems with their colleagues (Begat, 2005). Chang (2006) found that enhancing social support through engaging in social activities helped cope with work-related stress. According to Shader (2001), social support and group cohesion decreased stress, burnout, and absenteeism and improved job satisfaction and decreased the likelihood of nurses leaving the profession.

The fourth factor that nurses identified as a contributor to increased work-related stress was lack of autonomy or low control over their nursing practice (Attree, 2005). Nurses who perceived such a lack of control stated that they had *no* influence over work-

related matters and that they were not taken seriously; they felt powerless. When nurses did not feel empowered, they were more likely to have higher stress levels than nurses who had a strong sense of autonomy (Attree, 2005).

The fifth factor, attributed to increase work related stress is relationships with colleagues. Nurses reported conflict with either physicians or other nursing staff as largely responsible for the stress they experienced at work. When nurses were able to discuss problems with colleagues, they reported that their levels of stress diminished (Begat, 2005). On the other hand, they reported that verbal abuse by physicians, patients, families, and colleagues increased their stress (Rowe, 2005). Gray-Toft (1985) found that forming supportive, cohesive work groups effectively reduced both conflict and stress.

A sixth contributing factor in work related stress involves communication. High stress levels led to negative communication, lack of teamwork, and a feeling that colleagues were unresponsive (Oloffson, 2003). Negative communications may be received not only from other healthcare professionals, especially doctors, but also from patients and families (Hall, 2004). When effective communication broke down, nurses tended to withdraw from the situation and to focus on when the shift would end or resigned to a situation that they believed would not change (Begat, 2005). This study also found that when nurses received adequate information, there was improved collaboration and decreased stress and negative communication, such as discourtesy or anger. Boyle's research (2004) shows not only that communication can be improved but also that better communication improves job stress, job satisfaction, and patient outcomes.

The seventh factor of work-related stress explored in this review is rewards. Healthcare organizations often try to recruit or retain nurses by offering competitive rewards; however, reward or lack of reward is seldom a significant cause of work-related stress, poor job satisfaction, or a reason to leave the profession. More often, the significant cause is a perceived lack of respect and acknowledgement (McVicar, 2003). Weyer (2006) found a more nuanced relationship: Chronic psychological work-related stress resulted from a lack of reward proportionate to occupational effort.

Quality of Life

According to Chang (2000), quality of life is a self-reported or perceived measure of physical and mental health. In the study of the effects of long-term stress on individual physical and psychological health, researchers found that nurses experienced increased stress in situations of greater workloads and ethical and moral conflicts in the workplace, which resulted in poor perception of overall health (Begat, 2004; Stacciarini, 2004; Chang, 2006).

Job Satisfaction

Price (2001) defined job satisfaction as an attitude an employee has toward his or her work. A causal model examined nurse practice environment, burnout, job outcomes and quality of care was examined in Belgian nurses. The researchers found that poor organizational environments lead to increased burnout which in turn reduced job satisfaction, and increased likelihood of turnover from the organization or profession (Van Bogart, Meuelmens, Clarke, Vermeyen, Van de Heying, 2009) Low job satisfaction resulting from work-related stress and declining physical functioning have played a significant role in attrition from nursing (Blegen,1993).

A study by Kuhar (2004) showed that implementation of specific retention strategies positively affected nurses' job satisfaction. Kuhar's strategies were divided into three categories: people, process, and technology (people being social interaction, process referring to workflow, and technology which address the advent of scientific growth). Implementation of these strategies decreased the likelihood of nurses leaving their current positions or the profession entirely.

Anticipated Turnover

Increased job stress and less teamwork resulted in lower job satisfaction and a higher anticipated turnover (Schader, 2001). Studies have shown a significant correlation between job satisfaction and intention to leave the profession (Lu, 2002). Nurses leave the profession for diverse reasons; however, the current research indicates that certain interventions may decrease the likelihood of leaving the profession (Wilson, 2005). This research study examined what, if any, role the Clinical Nurse Leader (CNL) might play in decreasing stress, improving quality of life, improving job satisfaction and decreasing anticipated turnover among nursing staff.

Clinical Nurse Leader

In an effort to address the problems described above, the American Association of the Colleges of Nursing (AACN) has developed a master's prepared course of study aimed at keeping caregivers at the bedsides of patients (CNL, 2003). The Clinical nurse leader role was developed to: (1) implement evidence based practice in a timely fashion, (2) provide lateral integration of collaborative care, (3)collect and evaluate patient outcomes, (4) assess cohort risk and change plans of care when necessary(AACN, 2007).

The focus of this master's degree is to utilize advanced practice knowledge to improve patient care and to provide a more efficient work environment for all members of the healthcare team (CNL, 2003).

In response to changes in healthcare and the RN's role in those changes, the AACN established an exploratory committee to investigate issues related to the nursing workforce and education. Input from two studies conducted by the Institute of Medicine (IOM), *Crossing the Quality Chasm* (2001), as well as a follow-up report, *Health Professions Education: A Bridge to Quality* (2003), served as a starting point for identifying a new curriculum to prepare nurses to practice in the role of CNL (*CNL*, 2003).

This curriculum takes into account the Joint Commission on accreditation of Healthcare Organization's work, *Healthcare in Crossroads: Strategies for Addressing the Evolving Nursing Crisis* (2002), the American Hospital Association's Commission on Workforce for Hospitals and Health Systems report, *In Our Hands: How Hospital Leaders Can Build a Thriving Workforce* (2002), and a 2002 report by the Robert Wood Johnson Foundation *American Nursing Shortage*. These reports examined multiple, complex factors behind the inability to recruit and retain qualified nurses at the bedside. Although the studies identified many factors, they recommended two actions: (1) to concentrate on the needs of a new generation of nurses in the workforce; and (2) to create a professional role that would attract and retain the highest quality of personnel in the profession of nursing.

Statement of the Problem

Research on work-related stress factors, job satisfaction, and overall perception of health in nursing shows a relationship among these factors and the retention of nurses in the profession (Aiken, 2001; Hayes, 2005). This is an important area of research due to the shortage of nurses in the United States hospital practice. The Bureau of Health Professions projects that the current nursing shortage will worsen over the next 20 years, possibly becoming a shortage of 800,000 nurses by the year 2020 (Spetz & Given, 2003). Relatively recently, poor working conditions have resulted in low job satisfaction and/or have caused a large number of nurses to leave the profession entirely. Currently, nearly half a million registered nurses do *not* practice in the nursing profession, between 1996 and 2000, the number of licensed registered nurses *not* employed in nursing grew from 52,000 to over 490,000 (DHHS, 2002).

Current research has shown that due to the economic downturn, the shortage of nurses has decreased more than anticipated due to the attractiveness of employment opportunities and the ability of nurses to provide a livable wage (Buerhaus, 2010).

The advent of current legislation HR: 4872, Reconciliation Act of 2010 proposes providing 34 million currently uninsured persons with much needed access to healthcare resources, thus raising two questions;(1) is the current nursing workforce positioned to provide the needed care, (2) can the already burdened healthcare system provide good, safe, quality care for patients and supportive, healthy work environments for nurses?

Research by Aiken et al (2001) has demonstrated that increased morbidity and mortality for patients in acute care settings can be attributed to inadequate numbers of caregivers at the bedside. The effects of increased work-related stress, low job

satisfaction, and poor quality of life on nurses can negatively affect patient outcomes. In addition, these same three factors have greatly reduced the number of nurses who remain in nursing (Aiken et al.; Hayes, 2005). Therefore, exploring how the role of the CNL may influence these factors may provide an understanding of the negative effects of work-related stress, job dissatisfaction, and quality of life, thus resulting in future retention of nurses at the bedside.

Purpose of the Study

The purpose of this study was to explore the relationship of the newly created CNL role with work-related stress, quality of life, job satisfaction, and anticipated turnover of acute care nurses. In addition, this research examined the interrelationships among work-related stress, quality of life, job satisfaction, and anticipated turnover.

Research Hypotheses

Aim 1: To explore the effect of the CNL role on reducing work-related stress among nurses, as measured by the Nursing Stress Scale (NSS) (Gray-Toft, 1981).

Hypothesis 1: Nurses practicing on units with a CNL will exhibit a decrease in work-related stress compared to nurses practicing in units without a CNL.

Aim 2: To explore the effect of the CNL role on job satisfaction as measured by the Nursing Work Index-Revised (NWI-R) and perception of overall well-being among nurses, as measured by the Medical Outcomes Study Short Form-36 (SF-36).

Hypothesis 2: Nurses practicing in units with a CNL will exhibit increased job satisfaction and improved perception of quality of life compared to nurses practicing in units without a CNL.

Aim 3: To explore the effect of the CNL role on turnover as measured by the Anticipated Turnover Scale (ATS) for nurses.

Hypothesis 3: Nurses practicing on units with a CNL will exhibit decreased anticipated turnover compared to nurses practicing on units without a CNL.

Aim 4: To determine if the CNL was a predictor of RN's on acute care nursing units decreased work-related stress, improved job satisfaction, improved quality of life, and decreased quality of life anticipated turnover(ATS).

Hypothesis 4: The CNL is a predictor of decreased turnover, improved work-related stress, increased job satisfaction, and improved quality of life

Definition of terms. For the purposes of this study, the following terms were used:

1. Clinical Nurse Leader: Masters degree program developed by the American Association of Colleges of Nursing (AACN, 2007).
2. Work-related stress: The conflict an individual experiences from a disconnection between perception of the demands of the position and the inability to meet those demands (Rick & Perrewe, 1995).
3. Quality of life: A self-report measure of physical and mental health status (Chang, 2000).
4. Job satisfaction: An attitude an employee has toward his or her work (Price, 2001).
5. Anticipated turnover: Nurses' intentions to voluntarily terminate their nursing positions (Shader, 2001).

6. Autonomy: Self-governance (Webster, 2002).

Delimitations. The sample included registered nurses (RNs) currently practicing on nursing units employing CNLs. The sample included the following parameters for RNs:

1. Licensed in the State of Florida
2. Primary employment in the hospital setting
3. Able to read, write, and speak English

Limitations. The sample did not include Nurse Directors, Managers, Licensed Practical Nurses or ancillary personnel**:**

1. The CNL is a relatively new professional role; the number of CNLs in practice is limited.
2. The CNL is an initiative currently in the United States, thereby making infeasible extrapolation of the results to other countries.

Significance of the Study

In 2003, the AACN responded to the growing nursing shortage and changes in healthcare with a white paper, *The Role of the Clinical Nurse Leader*. The AACN white paper argues the need for a new hospital role, a master's prepared nurse who facilitates care and improves healthcare systems. Furthermore, the paper proposes that the CNL coordinates and plan team activities and functions. Core skills for the CNL role are delegating, supervising, evaluating, and supporting healthcare team members. This CNL proposal intends to retain master's prepared nurses at the bedside so that patients will receive better care and nurses' knowledge and value will be recognized (Long, 2004).

As the CNL role in nursing is implemented, how it affects the factors of work-related stress, job satisfaction, quality of life, and anticipated turnover deserve exploration. This study investigated whether the CNL decreased work related stress nurses and anticipated turnover, satisfaction and their perception of quality of life. The desired result is to decrease the number of nurses expressing a desire to leave the profession. A decrease could help alleviate the nursing shortage and retain qualified nurses at the bedside.

Chapter Two

Literature Review

This chapter first presents a review of the empirical literature related to these factors, factors that contribute to increased workplace stress, poor quality of life, low job satisfaction, and the likelihood of nurses leaving the profession of nursing. These factors are demonstrated in the literature review has having global consistency. Finally, a summary is provided of the potential effectiveness of initiatives to reduce stress and improve quality of life and job satisfaction as well as a description of further areas for research.

Review of the literature reveals that work-related stress can contribute to low job satisfaction, poor quality of life and increased likelihood of nurses leaving the profession. Work-related stress is well documented but no studies have been done to address the relationship of the newly created CNL on this stress phenomenon.

The literature is replete with references to the effects of work environment on nursing work- related stress, quality of life, job satisfaction and anticipated turnover (Stichler, 2009).

The review of the literature took an international focus to demonstrate the global issue of nursing work related stress. Work related stress, quality of life, job satisfaction and anticipated turnover for acute care nursing has been widely investigated in many cultures and countries. The succeeding section is a review of empirical literature on the factors contributing to work-related stress, perceptions of quality of life, job satisfaction

and anticipated turnover in. In conclusion a summary of the empirical literature is discussed.

Work Related Stress

The work of nursing varies from hospital to hospital and country to country and yet nurses repeatedly report increased levels of stress (AlArub 2004, Begat 2005, Boyle 2004, Bruyneel 2009, Chang 2006, Coomber 2006, Fletcher 2001, Golubic 2009, Hall 2004, Hayes2006, Janseen 1999, Lambert 2004, Makinen 2003, McGowan 2001, MNeely 2005, McVicar 2003, Metzenthun 2009, Oloffson 2003, Piko 2006, Santos 2003, Ruggerio 2005, Sveinsdotter 2005, Zeytinoglu 2005).

Work- related stress is an ongoing area of research in the nursing profession. Recently, Golbubic et al. (2009) cited six major groups of occupational stressors in a study of Croatian nurses. A cross-sectional study of 1086 (response rate 78%) nurses identified organization of work and financial issues, public criticism, hazards in the work place, interpersonal conflict, shift work and professional and intellectual demands as contributors to increased work stress. Specifically, organization of work and financial issues that were significant was: insufficient number of co-workers ($p< 0.08$), unexpected situations ($p<0.01$), and paperwork ($p<0.06$). Public criticism showed significance in conflicts with patients ($p< 0.02$), patients' inadequate expectations ($p<0.01$), and professional and private life stress ($p<0.01$). In the areas of hazard in the workplace and shift work, all variables showed statistical significance ($p<0.01$). The researcher concluded that in Croatian nurses with higher education there were substantially decreased levels of low workability, 37% in those with secondary education versus 30%

with higher education, indicating a need to further investigate the role higher education plays in decreasing factors causing work-related stress.

A recent clinical study conducted by Metzenthin et al. (2009) measured salivary cortisol levels in conjunction with a subjective stress tool in 82 pediatric and critical care nurses in Switzerland. The research revealed a statistically significant increase in cortisol levels when compared to subjective reported stress (p=0.04). Additionally, objective stress measured through a standardized hospital management tool did not show a statistical relationship to cortisol levels (p=.56).

A recent study sponsored by the National Institute of Health examined the predictive validilty of the International Hospital Outcomes study. This study served as pilot research for the RN4CAST consortitium which consists of 15 member nations that will indicate the effect of the nursing work environment and nursing staff deployment on recruitment, retention, and productivity and on patient outcomes in the 11 participating countries (Bruyneel, 2009).

A Norwegian study by Begat (2005) surveyed 71 nurses on how the stress levels they experienced at work correlated with job satisfaction and perception of psychosocial work environment. Begat (2005) found through factor analysis that there were six factors that had a high correlation to job stress and anxiety. Factor 1 measured job stress/anxiety which accounted for (15.05%) of the overall correlation with Cronbach's alpha of (α=.83), and factor one attributed increased stress to nurses feeling they had too much to do (α=.90) and being stressed out on the job (α = .87). Factor 2 explored relationships with colleagues resulting in an overall correlation of (13.66%, α = .63). Specifically, nurses identified a need to discuss problems (α =.80), responsiveness of subordinates (α

=.77), colleagues openness to new ideas (α =.75), and the ability to get information (α =.64). In Factor 3, collaboration/communication was responsible for (11.2%) overall with an alpha of 0.72. The nurses reported a positive relationship when they belonged to fellowship (α =.88) and when they were able to collaborate with others (α =.84). Factor 4 (10.7%, α = .74) showed nurse felt more job motivation when they were engaged at work (α =.81) and found the work interesting and stimulating (α =.75). Factor 5 looked at work demands (7.8%, α =.64), specifically planning, and noted a correlation between stress and no job description (α =.79) and lack of planning or routines (α = .78). Lastly, Factor 6 found a positive correlation with professional development (5.9%) and nurses being encouraged to develop new skills (α =.85). Overall, these 6 factors explained 64.3% (α =-.75) of the principal components of nurses perceptions of their psychosocial work environment (Begat, 2005).

A second descriptive study by Begat (2004) compared the responses of Japanese and Norwegian nurses on perceptions of work and moral sensitivity. This study revealed that both Japanese nurses (p<0.00) and Norwegian nurses (p <0.001) showed a significant correlation between work environment and moral sensitivity. The Japanese nurses showed a mild correlation to work demands and lack of time (p<0.05), a mild correlation with moral conflict (p<0.05), and a moderate correlation with job stress and anxiety (p<0.01). The Norwegian nurses also showed a moderate significance for job stress and anxiety (p<0.01), independency (p<0.01), as well as patient centered orientation (p<0.01). The results demonstrated that both groups of nurse displayed moral stress in their work environment. The Japanese nurses had a higher correlation to work

demands and lack of time while the Norwegian nurse had a stronger correlation to independency (Begat, 2004).

A survey of 1780 nurses in Michigan found that nurses believed they were being asked to provide more care with less staff and that patients had unrealistic expectations of the level of care (Fletcher, 2001). The respondents rated their mean professional stress compared to other health professions as high correlation (R= .90) indicating that most nurses experienced some level of work related stress. Additionally, the nurses rated their job satisfaction as 5.04 on a scale from 1 to7, concluding that they were somewhat satisfied with their job, and they rated their likelihood of leaving the profession as 4.08 on a scale from 1 to 5 indicating a low likelihood of leaving the profession (Fletcher, 2001).

A qualitative exploratory study looked at work related stressors and coping mechanisms in hospital registered nurses (Hall, 2004). The researcher interviewed 10 nurses in Kentucky and found that they believed that a shortage of skilled labor and polychronicity was responsible for their increased stress levels. The nurses identified categories that they felt were responsible for their stress and among them system barriers, self expectations, shortage of skilled labor, and colleague's inexperience as the most common reasons they were unable to meet the patients' needs and provide safe quality care. The study also found that negative communication, including anger and discourtesy, experienced in interactions with other health care professional, doctors, and patients and families was a source of stress. When effective communication broke down, nurses tended to withdraw from the situation and focus on when their shift would end or resign themselves to a situation they believed would not change (Hall, 2004).

British literature from 1985 until 2003 was reviewed to identify work-related stress factors; this resulted in 21 primary research studies being included in the review (McVicar, 2003). After collecting the evidence, the common factors were determined to be: (1)workload (2)inadequate staff (3)time pressure,(4) relationships with other clinical staff, (5)leadership style(6) poor locus of control(7)lack of supervisory support, (8)coping with death and dying,(9)shift work, and (10)lack of rewards (McVicar, 2003). In conclusion, the researcher suggested a need for ensuring professional, emotional and social support in the workplace as a stress preventative measure (McVicar, 2003).

A second review of the British literature from 1997 until 2004 was conducted by Comber and Barriball (2006), which explored job satisfaction and intent to leave for hospital based nurses. Nine articles were identified meeting the researchers' criteria; this review, like previous reviews, confirmed four major themes that impact job satisfaction and intent to leave: (1) leadership; (2) educational attainment; (3) stress; and (4) pay. The researchers concluded that the components of job satisfaction and intent to leave have been consistent over time. They recommended that additional research at the unit/ward level be conducted and that tools for comparability needed to evolve.

A study of 247 U.S. nurses by Ruggerio (2005) revealed there was no significant difference in the level of stress nurses experienced on a particular shift. However, further analysis on job satisfaction revealed several statistically significant relationships with global sleep quality ($p<0.54$), depression ($p<0.15$), emotional distress ($p<-0.05$), and number of weekends off a month ($p<0.04$) having a negative impact on all shifts.

Santos (2003) studied 694 nurses and found that increased stress was related to responsibility and physical work environment. In particular, this study found that Baby

Boomers experienced significantly higher stress levels regarding responsibility. These stressors included role overload (p=0.43), role insufficiency (p<0.01), role ambiguity (p=0.03), and role boundary (p<0.02).

A cross-sectional survey study conducted in Iceland looked a the differences among occupational stress, job satisfaction, and the working conditions in nurses practicing in the hospital setting and nurses in other settings (Sveinsdotter, 2005). A random sample of N=522 participants yielded a response rate of 42% (n=219). The researcher found that both hospital nurses and non-hospital nurses experienced high stress related to their working environment (t=0.75, p=0.45), and job satisfaction for the two groups was correlated moderately with occupational stress(r=0.41; p<0.01). The nurses working in hospital settings scored higher on variables related to strenuous working conditions. On average the hospitals nurses worked 39.4 hours weekly compared to the non-hospital nurse who worked 36.3 hours weekly (p<0.03), and hospital nurse provided 1.2 hours more direct patient care (p<0.03) (Sveinsdotter, 2005).

Different healthcare structures utilize different nursing models. To identify whether a specific mode/model of nursing was more prone to increase stress levels, Makinen et al. (2003) sampled 677 Finnish nurses on 30 wards. After distributing self-report questionnaires, the response rate was 84% (N=568) from 27 of the 30 units. Bivariate correlations showed specific components of organizing care and work overload as interrelated, specifically, work grouping (p=0.13), work allocation(p=0.94), duty rotation(p=0.18), accountability (p=0.79), writing nursing notes (p=0.91), and relationships with other disciplines(p=0.75). The authors studied primary, modular, team and functional nursing and found no significant difference in stress levels that could be

attributed to the mode/model of nursing (Makinen et al, 2003). Throughout the study nurses attributed these factors as contributing to their inability to deliver safe, quality patient care (Makinen, et al, 2003).

In the international community, nursing practice varies in part due to cultural differences and also because of a differing societal way of financing healthcare. In Japan the role of the nurse differs greatly from the nurse's role in western cultures; however, Lambert (2004) determined that the work place stressors in both eastern and western nursing environments are the same. A study of 310 Japanese nurses found a strong positive correlation between work place stressors and workload as well as likelihood of leaving the profession. Workload (p=0.01) showed a strong positive correlation with workplace stressors, in particular conflict with physicians (p=0.52), death and dying (p=0.47), conflict with other nurses (p=0.34), lack of support (p=0.34), inadequate preparation (p=0.46), and uncertainty of treatment (p=0.54).

A cross-sectional study on poor work environment and nurses' inexperience and their relationship to burnout, job satisfaction, and quality defects conducted in Japan in 2008 by Kanai-Pak et al. surveyed 5956 Japanese nurses on 302 units in 19 acute care hospitals. The results showed that 56% of nurses scored high on burnout, 60% were dissatisfied with their jobs, and 59% rated the quality of care as fair or poor.

Seventy-two Irish nurses identified a strong negative correlation between job satisfaction and stress, specifically managing workloads (r =-.40, p<0.01), dealing with patients and families(r =-.37, p<0.03) as well as management of unresponsiveness (r =0.56, p<0.00) (McGowan, 2001).

Additional research identified two levels of support including social support from colleagues and organizational support from management or leadership as important factors that decrease stress.

In another study, two hundred sixty-three Jordanian nurses felt that when they had strong social support they experienced less stress and had a higher level of job satisfaction (AbuAlRub, 2004). Upon analysis of this data, the researcher demonstrated that the nurses who felt supported provided an enhanced quality of patient care. The study tested four hypotheses. Hypothesis 1 postulated that nurses with increased social support would experience decreased stress, and this was supported with a negative correlation (r = -.10, p<0.01). Hypothesis 2 tested whether increased job stress would decrease job performance; this demonstrated a negative correlation that was not significant (r =-.10, p=0.09). The third hypothesis looked at the impact high social support had on job performance (r= .17, p<0.01) and was supported. Hypothesis 4 tested to see if increased stress was less for nurses with high social support and the effect of increased stress on job performance. The researcher determined this was not significant and required more research (AbuAlRub, 2004).

A literature review conducted in the United States included 15 empirical articles that were grouped into three themes: empowerment, job strain, and motivation. The research was shown to have a link to social support and stress in the work environment. The findings determined that social support was a main, moderating or mediating effect and was able to decrease stress, burnout, and absenteeism and improve job satisfaction (Shirey, 2004).

A study in the United Kingdom by Attree (2005) used a qualitative grounded theory method to identify nurse's perception of factors that affected their nursing practice.Utilizing semi-structured interviews the researcher found a core category of professional dissonance which then divided into three subcategories. The study showed that professional discrepancies, professional discontent, and professional dilemmas or decisions led nurses to a perception of a lack of governance, increased stress, higher turnover, and low morale. In conclusion, the study indicated that further investigation was needed to review nurse's involvement with clinical governance (Attree, 2005).

A comprehensive review of the literature examined common causative factors for nurse turnover in the U.S., Canada, England, Scotland and Germany (Hayes, O'Brien-Pallas, Duffield, Shamian, Buchan, Hughes, Spence Laschinger, North, Stone, 2006).Thirty seven studies reported measures of turnover or turnover intent, and five studies examined the consequences. The determinants for nurse turnover found by this review were job satisfaction and organizational characteristics. Organizational characteristics; workload, stress, burnout, management style, autonomy, advancement opportunities, work schedules, and economic factors were found to be moderating effects. In summary, the researchers concluded that administrative interventions to improve the quality of work life were necessary to effectively reduce turnover (Hayes et al., 2006).

Gray-Toft and Anderson (1985) developed a model to diagnosis and predict organizational stress. The researchers used measures of organizational climate, supervisory practices, and work group relations as predictors of role ambiguity and role conflict. Nurse stress was viewed as a direct cause of low job satisfaction and an indirect cause of absenteeism. The model was validated with data from 158 registered nurses,

licensed practical nurses, and nursing assistants on seven nursing units in a large private teaching hospital. The results of the study confirmed that role conflict, role ambiguity and stress are inherent in nursing. Administration was found to have a negative effect on role conflict (r =-0.19). Communication was found to have a negative effect on role ambiguity (r =-0.51) as was supervisory style (r =-0.16) and work group relations (r =-0.22). Job satisfaction was correlated negatively to conflict (r =-0.16 and stress(r =-0.18) and resulted in absenteeism (r =-0.05).The authors determined that staff are more satisfied and perform more effectively when they are in a supportive work environment that allows for open participation in decision making regarding policies and procedure which in turn helped alleviate role ambiguity and decrease stress (Gray-Toft, Anderson 1985).

An exploratory model of the antecedents and consequences of nurses' perceptions of respect and organizational justice in hospital settings was developed by Spence Laschinger (2001). A random sample of 285 nurses (response rate 52%) from an Ontario Canada hospital were surveyed on interactional justice, structural empowerment, perceived respect, work pressures, emotional exhaustion, and work effectiveness. Interactional justice proved to be the strongest antecedent of respect (r^2=0.72) followed by structural empowerment (r^2= 0.47) (adequate resources and support) and overall empowerment (r^2=0 .47). Negative antecedents were stress from lack of recognition (r^2=-0.38), poor work relationships (r^2=-.58), and heavy workload (r^2=-0.24). The positive consequences of respect showed the strongest relationship between respect and job satisfaction (r^2 =0.52) and trust of management (r^2=0.42) and noted a negative relationship between respect and intention to leave (r^2 =-0.24), emotional exhaustion (r^2

=-0.35), and depressive state of mind (r^2 = -0.21) (Spence Laschinger, 2001).The researcher concluded that a positive work environment contributed to nurses feeling respected/empowered and that respect was able to mediate stress in the work environment(Spence Laschinger, 2001).

Two hundred thirteen RNs and licensed practical nurses were queried at a larger Philadelphia trauma hospital on verbal abuse and increasing stress levels. The study reported nurses experiencing verbal abuse most frequently by other nurses (27%) followed by families (25%), physicians (22%), patients (17%), and other co-workers (9%) (Rowe, 2005). The research concluded that nurses who experienced regular verbal abuse were more stressed and less satisfied with their jobs and more likely to deliver ineffective care for their patients (Rowe, 2005).

In an interventional study conducted by Boyle (2004) made an effort to improve collaborative communication between physicians and nurses in the intensive care setting. The participants were instructed in modules on ways of improving communication. Aim 1was to assess the feasibility of a communication intervention for physicians and RN's in an ICU setting. Attendance was measured with a majority of participants attending 91% of the time. Aim 2 investigated the effects of the intervention and post- test scores showed a significant change in communication (t =2.81, p =0.02) but no significant change in relationships (t =-0.18, p =0.86).Aim 3 explored the sustained effect of the intervention after 6 months. All variables showed a change although they were not significant (MANOVA=0.31, p=0.13). This study showed that communication could be improved and that in doing so patient outcomes, job stress and job satisfaction could improve.

In summary, the literature reveals that work-related stress factors affect hospital nurses in many countries and cultures. The effects of work-related stress can result in low job satisfaction, high turnover, and poor patient outcomes (Aiken, 2001). Severe distress is linked to staff absenteeism and even ill-heath (Healy, McKay 1999, McGowan 2001, Shader et al, 2001).

The literature review has supported the fact that these variables are present globally. In this time of an ever increasing nursing shortage, the international community's of nursing need to explore ways of mitigating these work- related stressors and improve the work environment for hospital nurses and by doing so hopefully retaining nurses at the bedside.

Quality of Life

There is extensive research on the effects of long term stress on an individual's physical and psychological heath. Psychological and physical functioning is directly related to perception of quality of life.

A systemic review of the literature conducted in the United States (Gershon, Stone, Zeltzer, Faucett, Macdavitt, Chou, 2007) focused on understanding the effect of organizational climate on nurse health outcomes. The literature from 1997-2007 was explored, and 1414 articles met the researchers criteria for inclusion. They examined the association between quality of work life and themes: (1) blood and body fluid exposure; (2) musculoskeletal disorder; and (3) burnout. The systematic review provides growing evidence of research that demonstrates that hospital quality of work life can negatively affect nurses' health.

The Nurses' Health Study (NHS) Database was established in 1976 and included 121,700 married female RNs. Every two years questionnaires on medical history and lifestyle are sent to the entire cohort. In 1992 the Medical Outcomes study short form – 36 (SF-36) was included in the mailing. A study by Michael, Colditz, Coakley & Ichiro (2000) used the SF–36 results to look at domains of physical functioning, emotional functioning and social networks. Initially 75,434 women completed the survey; however, the researchers excluded respondents with coronary heart disease, cancer and stroke diagnosis, and incomplete surveys, resulting in a response rate of (73%) N=54,868. The study examined the relative impact of health behaviors on functional status as measured by the subscales of physical functioning, bodily pain, vitality, and role function. Normal body mass index (BMI), regular exercise, no alcohol consumption, and not smoking proved to correlate positively to physical functioning (r^2=0.19), bodily pain (r^2= 0.15), and vitality (r^2= 0.12) in women under 65(Michael et al., 2000). Next, the researchers examined the effect of social networking on the group and found that having three to five close friends, weekly participation in religious services and group participation had a positive relationship with physical functioning (r^2=0.17), bodily pain (r^2= 0.14),) and vitality(r^2= 0.14) in women under 60 (Michael et al., 2000). In summary, the study suggested that modifying health behaviors and establishing social networks are key elements in improving a person's perception of quality of life.

A second SF-36 questionnaire was mailed in 1996 to the Nurses' Health Study participants and further research was conducted by the Department of Health and Social behavior at Harvard School of Public health (Cheng, Kawachi, Coakley, Schwartz & Colditz, 2000). The researchers obtained a sample from the original respondents and

excluded those who were no longer in the workforce as well as anyone with coronary disease, cancer or stroke, which resulted in (N=21,290) (76.5%) nurses. Their conclusions proposed that adverse work conditions are important predictors of poor functional status and its decline over time, leading us to believe that a positive work environment affects health as well as quality of life (Cheng et al., 2000). Other research based on the Nurses' Health Study looked at 14 of research and determined that over time nurses who experienced minimal to high stress levels at work or at home were five times more likely to commit suicide (Feskanich, Hastrup, Marshall, Colditz, Stampfer, Willett & Kawachi, 2002). This study prospectively examined the association between self perceived stress, diazepam use, and death from suicide in 94,110 nurses. Analyses showed that 73 suicides occurred and that participants with severe stress at work or home had higher relative risk (RR) for suicide (RR=3.7, 95% CI 1.7to 8.3) (Feskanich et al., 2002).

A cross-sectional Danish study used and effort – reward model to test the association with psychological health and poor self-rated health (Weyers, Peter, Boggild, Jeppesen, Siegrist, 2006). Three hundred sixty-seven participants were included in the study with an overall response rate of 67.7%. Nurses were at risk of reporting poor health in relationship in two components of the proposed model, effort-reward ratio imbalance and over commitment. The study revealed five of the six indicators of effort reward imbalance and over commitment associated with poor self-rated health. Study results demonstrated statistical significance for overall poor general health ($p \leq 0.05$), poor psychological well being ($p \leq 0.05$), gastrointestinal complaints ($p \leq 0.05$),

cardiovascular complaints ($p \leq 0.05$), and musculoskeletal complaints (Weyers, et al, 2006).

An article by McNeely (2005) looked at the implications of job stress on nurses' health. The author identified that nurses felt a lack of control over their practice resulting in feeling powerless. They stated that they had no influence over work- related matters and that they were not taken seriously and therefore they experienced higher stress levels and in some cases reported an overall decrease in perception of health. The author suggested that additional research is needed to explore the relationship between nurses work, chronic job stress, and career and health trajectories and that interventional studies be done on work reorganization to improve the health of nurses(McNeely, 2005).

Olofsson (2003) conducted a grounded theory study that identified that negative stress was triggered in four Swedish nurses when they lacked confidence in their ability to deal with the demands of the job. Results showed nurses had an absence of response; this core category is described as an inability to respond or be receptive to people or sensations leading to feeling inadequate, powerless, frustrated and hopelessness. When these feeling are unaddressed over time they may have both psychological and physical effects (Olofsson, 2003).

Australian researchers Healy and McKay (2000) demonstrated a positive correlation between workload and stressing for N=128 nurses. The Nursing Stress Scale (NSS) factors accounted for 15% of the variance on Profile of Mood Scale (POMS) (p<0.01) with workload being the only significant predictor of mood disturbance.

Australian researchers Chang, Daly, Hancock, Bidewell, Johnson, V.Lambert and C Lambert (2006) surveyed 900 nurses with a response rate of N=320 (36%).The results

showed a negative relationship both physically and mentally between stress and four factors: workload (p=-0.20/ p=-0.32), death and dying (p=-0.17/ p=-0.19), uncertainty about treatment (p=-0.21/p=-0.28), and conflict with physicians (p=-0.18/p=-0.31). Additionally, the research demonstrated that physical health was only correlated to age and that mental health scores were higher for nurses who had good coping skills and experienced work place support (Chang, et al , 2006).

A study examining the occupational and non occupational variables predictive of job satisfaction and psychological distress of nurses utilized a convenience sample of 658 nurses at an urban university hospital resulting in a response rate of 436 (66%) (Decker, 1997). Included in the study were 376 female, fulltime nurses. Six variables were found to have significance in predicting job satisfaction ($p \leq 0.05$): head nurse, job/non-job conflict, coworkers, unit tenure, physicians, and other departments. Eight variables were statistically significant for psychological distress ($p \leq 0.05$): anxiety –trait, unit tenure, social integration, experience, head nurse, job/non- job conflict, level, and physicians. Overall, Decker (1997) demonstrated that occupational role relations were more predictive of job satisfaction than psychological distress and that implementing nurse manger interventions could have a positive response on both job satisfaction and decreasing psychological distress. In Finland researchers examined the justice of decision making procedures and interpersonal relationships as psychological predictors of self-rated health in hospital employees (Elovaino, Kivimaki, Vahtera, 2002). They sampled 5342 employees in seven hospitals in one healthcare district in Finland resulting in 4076 (76%) of the questionnaires completed. Ninety three percent of the nurses were women, and fifty percent of the physicians were men. The data was analyzed to identify

the odds ratio (95% CI) of poor self-rated health in men (OR=1.21, 95% CI 0.48 to 3.07) and women (OR= 1.76, 95% CI1.32 to 2.35) and the association with procedural justice. They also looked at the impact of organizational justice on minor psychiatric disorders in men (OR= 2.35, 95% CI0.92 to 6.01) and women (OR=1.32, 95% CI1.01 to 1.73). Lastly the research looked at the association with procedural justice and the incidence of absences in men (OR=1.61, 95%CI 1.12to 2.32) and women (OR=1.19, 95%CI 1.08 to 1.32). The study showed that organizational justice was associated with health in both men and women and that it was a stronger predictor of absence in men (Elovaino et al., 2002).

One randomized control trial was found testing the effects of stress on natural killer cells in nurse from Japan. The researchers found that quantitative workload was the strongest predictor for natural killer cell function as well as burnout. Salivary cortisol levels were correlated with a self reported measure of perceived stress (Morikawa, 2005).

Piko (2005) found 201 Hungarian healthcare staff experienced burnout when they had prolonged exposure to chronic job- related stress. Nurses and other healthcare staff in two hospitals in Hungry were sampled with 112 nurses returning completed questionnaires (response rate of 44.6%). The results showed that burnout, particularly emotional exhaustion, was strongly related to job satisfaction ($p< 0.01$) and that role conflict contributed positively to both emotional exhaustion ($p<0 .01$) and depersonalization ($p< 0.01$). This study also noted an increase in psychosomatic illness in nurses that experienced burnout and role conflict (Piko, 2005).

A Brazilian study of 461 nurses was done to describe occupational stress, job satisfaction, the nurse's state of health and the relationship to constructive thinking and

coping methods. The study reported a strong inverse relationships between global constructive thinking and psychological ill-health (r = - 0.67), occupational stress (r = - 0.34), and physical ill-health (r=- 0.27) (Stacciarini, Troccoli, 2004). Occupational stress was found to be significantly associated with psychological ill-health (r = 0.50) and physical health(r = 0.43) and inversely associated with job satisfaction (r = - 0.26); psychological health was correlated with physical ill-health (r = 0.66). This study demonstrated that increased work-related stress is positively correlated to decreases in perceived health (Stacciarini,Troccoli, 2004).

Few studies have implemented interventions to alleviate work place issues. Mimura (2002) completed an evidence based review of the literature on current approaches to workplace stress management. Seven randomized control trials and three prospective cohort studies were found. The researcher acknowledged that both the quantity and quality of the studies were weak.

In summary, a need for research that studies the relationship between healthy nursing work and productive, affordable, and safe healthcare systems was identified. Work environment is also noted to have an effect on job satisfaction.

Job Satisfaction

In a study by Aiken (2002) the correlation between staffing levels and patient mortality, nurse burnout and job satisfaction were measured. A cross-sectional analysis of 10,184 nurses measured self-reported job satisfaction and job-related burnout. Analysis of the data collected showed that an increased patient to nurse ratio resulted in a 23% (95% CI, OR 95% CI 1.13 to1.34) increase in burnout and job dissatisfaction and had an effect on patient outcomes (Aiken, 2002). In this study the researchers measured

the effect on specific variables when the patient to nurse ratio was increased. The authors found that the higher patient load for nurses directly correlated to a decrease in job satisfaction, an increase in work-related stress or burnout, and negative patient outcomes. Aiken (2002) suggested that improving staffing ratios may reduce nursing attrition, improve job satisfaction, and provide safer patient care.

In a meta-analysis of nurses' job satisfaction by Blegen (1993), 200 published and 50 unpublished studies were reviewed. Forty-eight of the articles were included in the meta-analysis. The strongest relationship with job satisfaction was stress (r^2= -0.69). Commitment had a positive correlation (r^2=0 .53) as did communication with supervisor (r^2= 0.45), autonomy (r^2 =0.42), recognition (r^2 =0.42), communication with peers (r^2 =0.36), and fairness (r^2 =0.29). Also noted in this review were weaker negative correlations of age (r^2 =-0.28) and education (r^2= -0.70). The remaining variables only showed a small correlation (i.e. locus of control, age, years of experience, and professionalism).

A study done at Ohio University School of Health Sciences surveyed the influence of organizational citizenship on job satisfaction (Bolon, 1997). The authors looked at the relationships between three organizational commitment components of organizational citizenship behaviors and job satisfaction. In this study organizational citizenship behavior was defined as:

> *Behavior that is discretionary, not directly or explicitly recognized by the formal reward system and that in the aggregate promotes the affective functioning of the organization.*

Nurses were 78% of a sample of 202 healthcare workers studied in a tertiary health care setting. Results showed job satisfaction was significantly and positively

related (r =0.22, p< 0.01) with organizational citizenship behaviors. Knoop (1995) looked at the relationship between job involvement, job satisfaction and organizational commitment for nurses. One hundred and seventy-one nurses were sampled in 11 hospitals. Results revealed that job involvement was significantly related to job satisfaction (r=0.33, p<0.01). Commitment was also shown to significantly relate to job satisfaction (r=0.64, p<0.01).

Leadership style is another variable that is noted to have influence on job satisfaction among nurses. In an article by Morrison (1997), the relationship between leadership style and empowerment and the effect on job satisfaction was explored. Four hundred forty-two nurses were included in the survey, which yielded 275 useable survey responses. Results revealed a positive correlation between job satisfaction and transformational leadership (r=0.64, r= 0.35), respectively.

Several studies looked the relationship between organizational commitment and job satisfaction. Alpander (1990) sampled 150 nurses in a general hospital. Nurses were asked to score skill variety, task completion task, autonomy, task significance, and feedback on the job using a 5-point-likert scale. Using Pearson's correlation all the items correlated positively and significantly with (r >0 .49) demonstrating that nurses' identification with the institution plays a significant role in their feelings and how motivated they are toward their job.

The relationship between organizational commitment relationship and job satisfaction was again studied in 2002 by Ingersoll. In this study questionnaires were sent to 12,000 nurses in the Central Finger lakes region of New York, and a sample of

4,000 was achieved to produce sufficient power (0.98) to detect statistical significance ($p<0.05$). Variables found to be significant ($p<0.01$) were commitment, autonomy, interaction, organizational policies, pay, professional status, and task requirements. The impact of these variables on job satisfaction was looked at as having an impact on nurses' stay in the profession at one year and five years.

Organizational commitment and the relationship to primary nursing have also been studied. Nelson (2001) surveyed 325 nurses and found that a primary nursing model was shown to increase autonomy and be statistically significant ($p<0.01$).

In addition to commitment, perceived work environment has been noted to have an impact on job satisfaction of hospital staff nurses. Tumulty (1994) explored the relationship between work environment and job satisfaction. Nurses at two acute care hospitals in the southeast were asked to complete a questionnaire. One hundred fifty-nine surveys were returned and eligible for inclusion in the study. Analysis of the data showed that highly satisfied nurses were more positive with the overall work environment than their unsatisfied coworkers. Analysis of variance showed that overall satisfaction ($F=0.04$), satisfaction with pay ($F=0.87$), and status ($F=0.36$) varied according to clinical specialty, employment status, professional education, and management status.

In the 12 years of research reviewed, nine factors have most often been cited as having statistically significant relationship with nursing job satisfaction. They are as follows: pay, status, commitment, autonomy, task, policies, interaction/support, communication, and control.

Anticipated Turnover

Work related stress, poor job performance are often identified in the literature as reasons nurses choose to leave the profession. A cross-sectional survey was administered to 390 nurses on 12 nursing units in a large university hospital in the southeastern U.S (Shader, Broome M, Broome C, West, Nash, 2001). This yielded a sample of 241 useable questionnaires (63% response rate). The investigators looked at the relationship between job stress, group cohesion, and stability of work schedule and anticipated turnover. Findings showed that more job stress resulted in lower group cohesion (r =0.41, p<0.01), lower work satisfaction (r =0.51, p=0.01) and higher anticipated turnover (r=.37, p<0.01). Conversely, higher job satisfaction resulted in the higher group cohesion (r =0.42, p<0.01) and lower anticipated turnover(r =0.47, p<0.01). Additionally, the research found that a stable work schedule resulted in less stress (r =-0.20, p<0.01), lower anticipated turnover (r =-0.29, p<0.01), higher group cohesion (r=0.43, p<0.01), and higher job satisfaction(r=-0.44, p<0.01). In summary, the study concluded group cohesion and good social support were responsible for increased job satisfaction and decreased anticipated turnover (Shader et al., 2001).

In 2002 the Pacific Northwest Nursing Leadership Institute (PNNLI) developed a program which consisted of 2-day retreat style workshop and seven additional 1-day modules (Wilson, 2005). Pre- and post-testing of the participants revealed anticipated turnover (ATS) was significantly reduced post- program.

A study in Taiwan showed that there was a significant correlation between job satisfaction and intention to leave the profession (Lu, 2002). A descriptive exploratory study in the Netherlands administered a self-report questionnaire to 175 nurses with an

89% response rate (N=156) (Janssen, 1999). This study showed a positive relationship between job contentment, support of colleagues (p=0.03), and job motivation (p=0.28). A negative relationship occurred with job contentment, unmet career expectations (p=-0.09), and turnover intention (p=-0.27). The research also revealed a strong relationship between mental work overload and emotional exhaustion (p=0.45), unmet career expectations (p=-0.01) and turnover intention (p=0.50). The research determined that the demands of nursing and a lack of social support contributed to emotional exhaustion, increased stress levels, and an increased likelihood of leaving the profession (Janssen, 1999).

Canadian nurses were surveyed at three large teaching hospitals in Ontario, Canada in order to examine the effects of job preference, unpaid overtime, importance of earnings, and stress on retention in hospitals and the profession (Zeytinoglu, Denton, Davies, Baumann, Blythe, Boos 2005). Multiple surveys were mailed, yielding 1396 responses with a 52% response rate. The results showed a high propensity of leaving the hospital and leaving the profession with a positive correlation (r=0.47, $p \leq 0.01$). Stress had the strongest positive correlation with a high propensity to leave the hospital (r =0.37, $p \leq 0.01$) and leave the profession (r =0.25, $p \leq 0.01$), and preference for a different job status also showed a positive correlation with leaving the hospital (r =0.16, $p \leq 0.01$) and leaving the profession (r =0.06, $p \leq 0.01$). The importance of income had a negative correlation with leaving the hospital (r =-0.09, $p \leq 0.01$) and leaving the profession (r =-0.07, $p \leq 0.01$) (Zeytinoglu et al., 2005). The researchers concluded that attention needs to be paid to stress, job preference, importance of earnings, and use of unpaid overtime in efforts to retain nurses both in hospitals and in the profession (Zeytinoglu et al., 2005).

Summary

A global perspective, of nursing care varies but the variables related to increased stress levels are consistent. The literature review reveals that the stress of working as a nurse can contribute to poor job satisfaction, poor patient outcome, and poor perception of psychological and physical health, and, in extreme cases, suicide. The reasons nurses leave the profession are diverse; however, the current research leads us to believe that there are interventions that could be implemented that may decrease the likelihood of leaving the profession.

This research examined what role the CNL might play in improving job satisfaction and decreasing anticipated turnover in the United States. The documentation of work-related stress is one step; the next step needs to involve developing ways of reducing stress. The fact that there are very few interventional studies looking at ways of reducing work-related stress show an area for future research Some research has been done to explore this through qualitative research gathering nurses' opinions on why they experience an increase in stress.

Chapter Three

Methods

Chapter three outlines the research methods and the procedures for this study. First, the research design is discussed. This is followed by a description of the sample and setting, inclusion and exclusion criteria, instrumentation, procedures, approvals, and informed consent. Finally, the data analysis procedures are presented.

Design

An *ex post facto* design was used to test the hypotheses of this study. This study was designed to explore the relationship of the CNL role with work-related stress, quality of life, job satisfaction, and anticipated turnover of acute care nurses. In addition, the study examined the interrelationships among work-related stress, quality of life, job satisfaction, anticipated turnover and the Clinical Nurse Leader role. The following Logic model developed from the Logic Model for Psychosocial Research (Evans, 1992) was used to guide the study design. This logic model depicts the research hypothesis, that the role of the Clinical Nurse leader has a relationship with nursing work related stress, quality of life, job satisfaction and anticipated turnover. This is depicted in Figure 1.

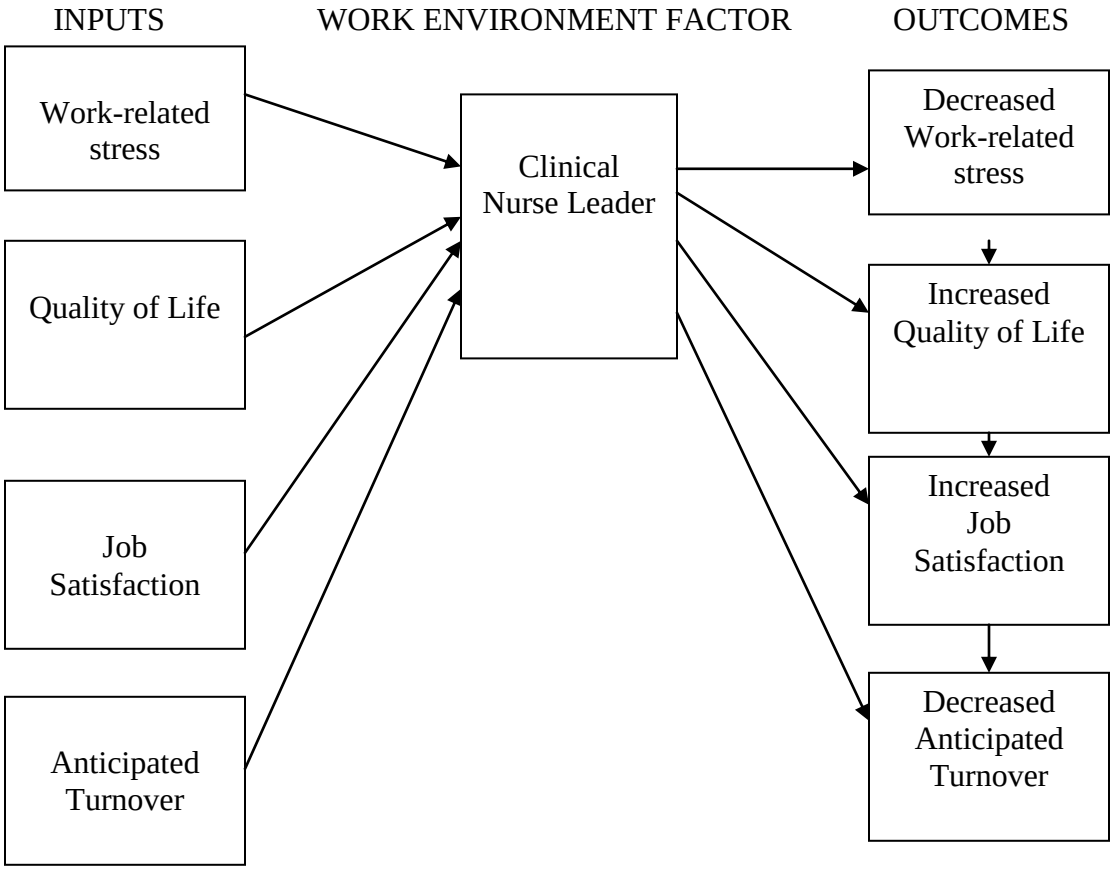

Figure 1.Hypothesized Logic Model.

Setting and Sample

Setting. Three acute care hospitals that utilize the CNL role in the Tampa Bay area on the West Coast of Florida were chosen in order to provide consistency in this study. The sample was sought from these institutions because they were among the first to implement the role. The units that were surveyed included Medical Telemetry, Urology, Orthopedics and Medical Surgical units with a CNL' and similar units at these facilities without CNLs.

Sample. The number of subjects required for a power of .80; assuming a medium effect size.50; and an alpha level of .05 was estimated at 63 per group for a total of 126 (Polit& Hungler, 1999). Table 1 displays the figures for reported means and standard deviations as well as the magnitude of the differences for the power of two-sided independent t-tests with significance levels of 0.05 and a power of 80%.

Table 1

Instrument Means and Standard Deviation and Effect Size

Instrument	ID	*n*	*M*	*SD*	ES
Nursing Stress Scale	CNL	46	83.456	11.407	-0.04
	Non-CNL	48	83.979	12.853	
Nursing Work Index-Revised	CNL	46	110.021	21.750	0.06
	Non-CNL	48	108.666	23.038	
Medical Inventory Short Form	CNL	46	115.630	9.641	-0.01
	Non-CNL	48	115.729	9.886	
Anticipated Turnover Scale	CNL	46	47.326	4.971	0.46
	Non-CNL	48	44.708	7.351	

Inclusion criteria. Inclusion criteria for participants included: (1) RNs from three "not for profit hospitals." These hospitals currently employ CNLs; (2) RNs from units with CNLs and RNs from similar units without CNLs; (3) RNs who speak and read English (4) CNLs must have graduated from a program of study in accordance with the American Association of Colleges of Nurses (AACN) guidelines for CNL educational preparation.

Exclusion criteria. Exclusion criteria for participants included:1) Nurses from other than the selected hospital units;2) nurse managers, CNLs, LPNs and nursing assistive personnel; 3) RNs who do not speak or read English. The reason for this third exclusion is that the survey instruments are written in English, and the primary investigator does not speak or read Spanish, the language other than English likely to be prevalent in Florida.

Instrumentation

The following instruments were utilized: the Nursing Stress Scale (NSS) (Hinshaw, 2000) (Appendix A); the Medical Outcomes Inventory Study Short Form (SF-36) (Hayes, 1998) (Appendix B); the Nursing Work Index Revised (NWI-R) (Aiken, 2001) (Appendix C; and the Anticipated Turnover Scale (ATS) (Gray-Toft, 2000) (Appendix D) and a demographic data tool (Appendix E).

Nursing Stress Scale

The Nursing Stress Scale (NSS) consists of 40 questions using a 4-point Likert scale to identify how frequently a nurse found individual situations stressful (Gray-Toft, 1981). Four response categories are provided for each item: never (1), occasionally (2), frequently (3), and very frequently (4).

A total score measures the overall frequency of stress experienced by a nurse and can be created by adding the individual's responses to all items. The higher the overall response indicates a nurse experienced more frequent episode of stress as related to individual questions of stress experienced in the physical environment, psychological environment and physical environment. The lower scores indicate that a nurse experiences less frequent stress regarding the same situations. Total scores range from 0 to 102, with higher scores indicating more frequent stress (Gray-Toft, 1981).

Validity of the NSS. Factor analysis revealed seven factors comprise the NSS. Factor I measures stressful situations resulting from the suffering and death of patients. Four of seven items that loaded on this factor are related to the death of a patient. Two additional items are associated with patients who fail to improve or who suffer. The Factor II deals with conflict with physicians, especially stressful situations that arise from the nurses' interactions with physicians. The two items that load highest on this factor are criticism by a physician and conflict with a physician. The other items pertain to the nurses' fear of making mistakes concerning treatment in the absence of a physician and disagreement concerning treatment. Factor III measures inadequate preparation, specifically feeling inadequately prepared to deal with the emotional needs of patients, families. Factor IV measures the lack of support nurses felt they had to vent negative, angry or frustrated feelings. Factor V identifies conflict with other nurses and supervisors as a stressor. The items that load on this factor are associated with difficult situations that arise between nurses and supervisors. Two of the items involve conflict with or criticism by a supervisor; the other three items have to do with conflict with nurses on the same or other hospital units. Factor V relates to the physical environment, t

work load which includes stressful situations that arise from the nurse's work load, staffing and scheduling problems, and inadequate time to complete nursing tasks and to support patients emotionally. Factor VII identified nurses facing uncertainty concerning treatment as a contributing factor. The items that load heavily on this are situations when the physician fails to adequately communicate to the nurse information concerning a patient's medical condition or is not present in medical emergencies (Gray-Toft, 1981).

Reliability of the NSS. Test-retest reliability for a two-week period with a sample (N = 31) resulted in an alpha of 0 .81 Four measures of internal consistency reported by the researchers resulted in a Spearman-Brown coefficient of 0.79, a Guttman split-half coefficient of ,0.79, and a coefficient alpha 0.89. Internal consistency measured for five of the seven subscales resulted in an alpha >0.70, two subscales conflict with physicians resulted 0.68 and lack of support 0.65. This instrument demonstrates good overall reliability (Gray-Toft, 1981).

Nursing Work Related Index-Revised

The NWI-R is a self-report of nursing situations that commonly occur on hospital units (Aiken & Patrician, 2000). The NWI-R consists of four subscales with 57 items on a 4-point Likert scale. The scores range from 1 strongly agree to 4 strongly disagree, with lower overall scores indicating higher levels of job satisfaction The NWI-R was derived from the 65-item Nursing Work Index (NWI) developed by Kramer and Hafner (1989) and associated with early research on magnet hospital characteristics. The NWI-R was modified to focus on the characteristics of the nurses rather than on those of the organization. Of the 65 items on the NWI, 55 were retained, one was modified, and one added. The 57 items were then divided into four subscales measuring: autonomy; control

over practice; nurse-physician relationships; and organizational support (Aiken & Patrician, 2000).

Validity of NWI-R. Validity was determined in two ways: First, content validity was evidenced by the fact that magnet hospital characteristics were used as the basis for NWI development. The original researchers, attested to the content validity. Secondly, criterion-related validity was supported by correlation of NWI-R scores with certain organizational measurements associated with better outcomes. In particular, both higher NWI-R scores and patient-satisfaction scores were found in magnet hospitals (Aiken & Patrician, 2000).

Reliability of the NWI-R. The overall NWI-R reliability resulted in a Cronbach's alpha of 0.96; for individual levels: autonomy, 0.75; control over practice, 0.79; nurse-physician relationships, 0.76; organizational support, 0.84. After aggregation of individual nurse scores, the alpha subscales were 0.85 for autonomy; 0.91 for control over practice; 0.84 for nurse-physician relationships; and 0.84 for organizational support: These figures demonstrate good internal consistency, reliability (Aiken & Patrician, 2000).

Medical Outcomes Inventory Study Short Form (SF-36)

The Medical Outcomes Inventory Study Short Form (SF-36) is a self-report measure of health related quality of life. The survey instrument includes eight subscales which are divided into two summary measures Physical and Mental health.

The Physical health summary consists of ; Physical functioning (PF) which measures physical limitations such as ability to perform activities, lifting, carrying, climbing stairs, bending, kneeling walking and bathing dressing. Role physical (RP)

refers to limitations of activity. The Bodily pain (BP) scale which measures pain intensity and interference with normal activities. The perception of General health (GH) measures self assessment regarding overall health as compared to others and health expectations.

The Mental health summary consists of the Vitality (VT) subscale which asks participants to rate their level of energy. The Social functioning (SF)scale which assesses the extent physical and emotional health have impacted the ability to engage in social activities, the role emotional (RE) scale which asks to what extent have emotional problems limited your work or daily activity. The mental health (MH) scale uses a 4 week period to gauge the way a participant has been feeling (Ware et al., 1993). The summary scores for mental and physical health as well as the subscales measure self perceptions of quality of life.

Originally developed as a multipurpose health survey instrument, SF-36 has been translated in more than 50 countries has become the most extensively validated and used generic instrument for measuring quality of life. It has extensive applications for health surveys, measuring physical and mental health across groups of diverse populations (Contopoulos-Ioannidis DG, Karvouni A, Kouri I, Ioannidis JP, 2009) The SF-36 has been administered in various population surveys in the U.S. and other countries (Ware, Keller, Gandek, Brazier, & Sullivan, 1995), as well as to young and old adult patients with specific diseases (Ware et al., 1993; McHorney et al., 1994). There is little research that uses the SF-36 survey to measure the physical and mental health of nursing populations.

Validity of the SF-36. Research to test the factorial validity of the SF-36 with health system employees as part of a study of health status was conducted in 1995 and

1996(Reed, 1998). Confirmatory factor analysis and structural equation modeling techniques were used to evaluate the data. The results of this study suggest that Mental Health and Physical Health are not independent; Mental Health cross-loads onto Physical Health and general health loads onto Mental Health instead of Physical Health. This study supports the second-order factorial structure of the SF-36. Adding the covariance path between the variables Physical Health and Mental Health improved model fit. Health perception was influenced by Mental Health rather than Physical Health, and mental health was influenced by both Mental Health and Physical Health. This cross-loading suggests that the perception of Physical Health greatly affects mental health. This study indicated that a comparison of mean scores or summary scores is inappropriate due to instabilities in subscales. Data interpretation can be improved if multi-groups structural equation modeling is used (Reed, 1998).

Research in Greece, specifically aimed at health care workers demonstrated that Medical doctors and technical personnel reported better health status than nurses; women reported poorer health status than men on all eight SF-36 dimensions; younger employees reported poorer health status than their older counter partners. Moreover the mean scores on all SF-36 dimensions reported by the participants on this study were considerably lower than the U.S and many European national norms. The study results constitute an indication of the SF-36 construct validity (Tountas, 2003).

Reliability of the SF-36. The subscales have been repeatedly tested for validity and reliability. The following are the eight dimensions of the instrument; have a demonstrated reliability reported as physical functioning (PF) role physical (RP) .89, bodily pain (BP) .90, self assesses perception of general health .81, vitality (VT) .86,

social functioning (SF), .68, role emotional (RE), .80 and mental health(MH) (Ware et al., 1993; Ware et al., 1994).

A study of 225 nurses, demonstrated alpha reliability coefficients for each of the subscales as follows: general health .85; vitality .85; bodily pain .82; physical functioning .83;role physical .84; role emotional .80, mental health .80; and social functioning .83 (Budge, 2003). The SF-36 was determined to be both a valid and reliable measure of both physical and mental health.

Anticipated Turnover Scale

The ATS measures nurses' intentions to voluntarily terminate their nursing positions. Self-administered the ATS uses 12 items on a 7-point Likert scale; with 1 representing agrees strongly ranging to 7 disagrees strongly. The higher scores indicate respondents' greater intention to remain in their current positions and/or the profession. The lower scores indicate less likelihood of nurses leaving their current position.

Validity of the ATS. The ATS was validated through an assessment of convergent and discriminate validity (Atwood, Hinshaw, 2003). Principal components factor analysis yielded a two-factor solution that explained 55% of the variance. Additional construct validity was estimated by predictive modeling techniques (De Groot, 1998).

Reliability of the ATS. The researchers that developed this instrument report a Coefficient alpha reliability as.84 (N = 1525) (Hinshaw & Atwood, 1984). A cross-sectional study of randomly selected registered nurses (N=463) in Missouri, yielded an estimated a reliability of .94 (Hart, 2005).

In this research the ATS has a reliability using Cronbach's alpha at 0.94. The normal range of values is .00 and +1.00, and a higher value reflects a higher degree of internal consistency (Polit, Hungler, 1999).

Demographic Data Form

The demographic data form, developed by the primary investigator, measured both work history and individual variables of the participants. The specific items examined were; age, gender education preparation, length of employment in nursing, at the hospital and unit level, work status, marital status, number of children and ethnicity.

Procedures

Approvals. Permission to use the NSS, ATS, and NWI-R were not needed as reproduction of these instruments for noncommercial use does not require permission from the authors. Permission to use the SF-36 was purchased. Approval for this study by the Institutional Review Board (IRB) of the University of South Florida (See Appendix F), as well as the IRB of Informed consent from the participating hospital system (See Appendix G) was obtained. Additionally, a modification of the original IRB approval was obtained due to changes in the recruitment procedures and informed consents (Appendix H).

Recruitment and Data Collection

The primary investigator contacted the three hospital system to initiate research after receiving their IRB approval. The principal investigator then posted signs inviting registered nurses to participate in informational session in team member lounges on the selected units announcing dates and times for the sessions regarding the study (See Appendix I). Potential study participants were approached by the PI and asked to take

part; only individuals who met the inclusion criteria on the selected units were invited to participate. To explain the study's aims to potential participants during the recruitment process, the informational sessions at each hospital were held at times and locations convenient for participant attendance. During the informational sessions the investigator explained the study purpose and intent to use the data to describe the CNL role as related to the variables of nursing work related stress, quality of life, nursing job satisfaction and anticipated turnover. It was clearly stated that participation was voluntary and anonymous.

Those who agreed to participate signed an IRB approved informed consent form and were given a copy of the signed consent form. Survey packets were distributed with instructions on completion and participants were given the option of completing the surveys and returning them to the PI or forwarding them via a stamped addressed mailer. Specifically, the RNs were asked to complete five survey instruments, including a researcher-developed demographic form. The four other surveys were used to measure the variables: work-related stress, job satisfaction, quality of life, and anticipated turnover.

The PI then collected the surveys and screened them for completeness. Next, the surveys were coded by group, identifying the nurses on units with CNLs and the RNs on units that did not work with CNLs. No personal identifying data was attached to the surveys. The data was collected and analyzed to examine any associations between participant characteristics and the variables of significance.

Demographic data was collected from the participants to allow for description of the sample. Demographics included the following**:** age, gender education preparation, length of employment in nursing, at the hospital and unit level, work status, marital status, number of children and ethnicity.

Each participant was given instructions to mark the surveys with a code known only to them (e.g., mother's month and year of birth). Results of this research study are reported only as aggregate data.

Data from the surveys was used to determine whether the CNL role has a relationship to nurses' work-related stress, quality of life, job satisfaction, and anticipated turnover

The aims were designed to explore specific constructs of the theoretical framework and are as follows. Steps 1, 2, and 3 were aimed at exploring the role the CNL had in decreasing work related stress, improving quality of life, increasing job satisfaction and decreasing anticipated turnover for RN's on acute care nursing units

1. *(Aimed at exploring the potential of the CNL role as a means of decreasing nursing work related stress).* To measure the levels of nursing work related stress using the NSS, nurses were asked to rate the frequency that they experienced stress on their nursing unit by depicting specific situation. Areas explored included patient situations, interactions with colleagues, supervisors and physicians, and overall work environment.
2. *(Aimed at exploring whether the CNL role improved nurses' quality of life).* To determine self reported quality of life via the SF-36 the nurses were questioned on perceptions of physical, emotional and social health.

3. *(Aimed at exploring whether the CNL role improved nurses' job satisfaction and decreased anticipated turnover).* Using the NWI-R, RNs were asked to answer questions pertaining to satisfaction, autonomy, organizational support and nurse physician relations. Using the ATS nurses were asked questions regarding the likelihood of leaving their current nursing job.
4. *(Aimed at determining if the CNL was a predictor of RN's on acute care nursing units decreased work-related stress, improved job satisfaction, improved quality of life, and decreased anticipated turnover).* Using the cumulative score of each of the prior instruments multiple regressions holding each variable as a constant were used to determine if the CNL role was a predictor.

Data Analysis

Statistical analysis tested four hypotheses. The following section presents the hypotheses tested and the data analysis procedures. The following three hypotheses were tested using independent t-tests.

H_1: Nurses practicing in units with a CNL will exhibit a decrease in work-related stress compared to nurses practicing in units without a CNL.

H_2: Nurses practicing in units with a CNL will exhibit improved perception of quality of life compared to nurses practicing in units without a CNL

H_3: Nurses practicing in units with a CNL will exhibit increased job satisfaction, and decreased anticipated turnover compared to nurses practicing in units without a CNL.

The fourth hypothesis was tested using multiple regressions.

H_4: The CNL role is a predictor of decreased anticipated turnover, improved work-related stress, increased job satisfaction, and improved quality of life.

To be confident the PI assured (1) Independence; (2) Normality, was achieved as this sample size was >20;and (3) Homogeneity of variances were assured with equal sample sizes.

Hypothesis four was tested by multiple regressions to determine if the CNL role is a predictor of decreased anticipated turnover, improved work-related stress, increased job satisfaction, and improved quality of life for RN's on acute care nursing units. The assumptions of the regressions are that the predictor variable is fixed and measured without error. The data was observed for linearity, homoscedastcity of errors, the errors were normally distributed, independent of one another, and errors were independent of predictor variable.

Data Management

A Statistical Package for the Social Sciences (SPSS) Verizon 17.0 was used for data entry and analysis. This program was password protected to secure confidentiality for data entry, management, and analysis. Each participant was given a number that was recorded on a master list of participants and kept in a locked file in the investigators home office. The completed study questionnaires and forms were secured in a locked area in the investigators home office.

Results are reported as aggregate data only. No individuals can be identified by any demographic data including hospital or work unit as this was a specific concern of participants fearing retribution for reporting possibly negative data regarding leadership.

Chapter Four

Results

This chapter first presents the results of this study related to the differences in work related stress, quality of life, job satisfaction and anticipated turnover on nursing units with CNL and those without. This is followed by a presentation of the results according to each research hypotheses.

Sample

One hundred twenty eight RNs from three research sites expressed an interest in participating in the study. Thirty four surveys were not included Twenty two surveys were not returned and twelve were returned partly completed survey forms. Participants were designated as RN's from units with CNL's and RN's from those units without CNL's. Ninety four participants completed a demographic form and completed the Nursing Stress Scale, the Nursing Work Related Index Revised, the Medical Outcomes Short Form and the Anticipated Turnover Scale.

Demographic data was collected and included age, gender, marital status ethnicity, educational nursing preparation, number of years in nursing, length of employment at hospital, length of employment on unit, work status, presence of children/number, and nursing certification. All participants (*N*=94) completed the demographic data form.

The mean age for this group of registered nurses was 41.9 years (*SD*=9.75). Their age ranged from 23 to 65 years. The nurses on units with CNL's group (Group 1) (*n*=46)

mean was 43.6 years (*SD*=9.58). The age range for the nurses on units without CNL's group (Group 2) (*n*=48) mean was 40.6 (*SD*=9.77).

The participants gender is reported as 90.4% female (*n*=86), male as 8.5% (*n*=8). CNL had 82.2% (*n*=38) females and 17.8% (*n*=8) males. Non- CNL had 100% (*n*=48) female. Table 2 displays the gender by frequency and percentages.

Table 2

Frequency and Percentage Gender by CNL and Non-CNL Group

Gender	CNL	Non-CNL	*n*	%
Female	38	48	86	90.4
Male	8	0	8	8.5

Fifty –six (59.6%) of participants were married, 11.7% (*n*=11) reported being single, and 27.7% (*n*=26) divorced. The marital status of the groups differed with a much higher percentage of the non- CNL group being married (non CNL= 72.9%, CNL= 46.7%). The CNL sample had a higher rate of single (CNL = 15.1%, non CNL=8.3%) and divorced participants (CNL= 37.8%, 18.8%). Table 3 depicts the frequency and percentage of marital status by group.

Table 3

Frequency and Percentage of Marital Status by CNL and Non- CNL Groups

Marital Status	CNL	Non-CNL	*n*	%
Single	7	4	11	59.6
Married	21	35	56	11.7
Divorced	17	9	26	27.7

Table 4 displays the ethnicity of the participants. The majority were white, non-Hispanic 80.9% (n= 76), white Hispanics made up 9.6% (*n*=9) of the population, 6.4% (*n*=6) were Filipino, 2.1%, were black non- Hispanic (*n*=2), and 1%(*n*=1) reported ethnicity as other. The ethnic diversity of the subgroups was similar with predominately white, non Hispanic participants; (CNL had 82.2% and the non CNL 79.2%). The CNL group had a higher percent of Hispanic participation at 13.4% versus the non CNL group at 6.3%. The non CNL group had a higher portion of the sample from the black and other categories (4.2%, 2.1%).Filipino study participants accounted for 8.4% in the non CNL group and 4.4% in the CNL.

Table 4

Frequency and Percentages of Ethnicity by CNL and Non CNL Groups

Ethnicity	*CNL*	*Non-CNL*	*n*	*%*
White Non-Hispanic	37	38	75	79.8
White Hispanic	6	3	9	9.6
Black Non Hispanic	0	2	2	2.1
Filipino	2	4	6	6.4
Other	0	1	1	1.1

Table 5 displays the frequency and percentages of educational preparation by group. The majority of the sample 56.4% (n=53) received Associates level education. followed by 26.6% (n=25) receiving Bachelorette preparation, an additional 14.9% (*n*=14) were educated in Diploma programs and 1% (*n*=1) were Masters prepared. Group1 reported 57.8% (*n*=26) as Associates degree nurses, 22.2% (*n*=10) Bachelors prepared, 20.0% (*n*=9) as Diploma graduates and no Masters prepared nurses. Group2 consists of 56.3% (*n*=27) Associate degree nurses, 31.3% (*n*=15) bachelors degree nurses, 10.4% (*n*=5) Diploma graduates and 2.1% (*n*=1) masters prepared nurses. In this study there were no doctoral prepared nurses and degrees outside of nursing were not explored.

Table 5

Frequency and Percentage of Educational Preparation by CNL and Non-CNL Groups

Education	CNL	Non-CNL	*n*	%
Diploma	9	5	14	14.9
Associates	26	27	53	56.4
Bachelors	10	15	25	26.6
Masters	0	1	1	1.1

Table 6 displays the range and means for length of employment in the nursing profession, the current hospital and the individual unit by group. The overall sample consists of RNs in practice ranging from 9 months to 44 years with a mean of 12.9 years of experience in the profession. The CNL group ranged from 2 years to 44 years with a mean of 14.6 years in nursing, and the non-CNL group ranged from 9 months to 42 years and had a mean of 11.4 years in nursing. The overall sample of nurses had been employed at the current hospital ranging from 2 months to 28 years with a mean of 7.9 years. The CNL group showed employment with the hospital ranging from 3 months to 28 years with a mean of 7.0 years. The non-CNL group showed current hospital employment ranging from 3 months to 28 years with a mean of 8.6 years. The nurses reported working on the current unit with a range of 2 months to 25 years and a mean of 5.7. Group 1 showed unit tenure as ranging from 3 months to 13 years with the mean being 4.1 years. Group 2 reported employment on the current unit they were working on at the time of the study ranging 2 months to 25 years with mean of 6.5 years

Table 6

Means and Standard Deviation for Length of Employment in the Nursing Profession, in the Current Hospital and on Individual unit by CNL and Non-CNL Groups

Nursing Profession	*M*	*SD*
CNL	12.9 years	10.87
Non-CNL	14.6 years	11.01
Hospital		
CNL	7.04 years	6.55
Non- CNL	8.6 years	6.95
Unit		
CNL	4.1 years	3.30
Non- CNL	6.5 years	5.43

Table 7 displays the work status was reported as full-time, part-time, per diem/ pool, agency, or seasonal contract by group. Overall, nurses in this study reported 75.5% (*n*=71) worked full-time, 17% (*n*=16) worked part-time, 2.6% (*n*=3) were working on seasonal contracts, 2.3% (*n*=3) worked per diem/pool, and 1% (*n*=1) worked agency.

Table 7

Frequency and Percentage of Work Status by CNL and Non-CNL Groups

Work Status	CNL	Non- CNL	*n*	%
Full- time	32	39	71	75.5
Part-time	10	6	16	17.0
Seasonal Contract	2	1	3	2.6
Per Diem/ pool	0	2	2	2.3
Agency	1	0	1	1.1

Research Hypothesis Number One

To test the first hypothesis, "Nurses practicing in units with a CNL will exhibit a decrease in work-related stress compared to nurses practicing in units without a CNL," analysis was conducted using independent t tests.

Means and standard deviations for the dependant variable of the presence of the CNL in decreasing work related stress are presented in Table 8. There is a variance in sample size with the CNL (*n*=46) and, Non-CNL (*n*=48). The *M* for the two groups are CNL *(M= 83.45 SD ±11.45), Non-CNL (M= 83.97 SD ±12.85).*

Table 8

Sample Means and Standard Deviations for Nursing Work Related Stress

Group	*N*	*M*	*SD*
CNL	46	83.45	11.40
Non-CNL	48	83.97	12.85

Table 9 reports the results on the independent t tests regarding the variable nursing work- related stress. The level of nursing work related stress experienced was not significantly different (t= -0.208, p=0.83) between the two groups. This indicates no significant difference with the presence of the CNL on the nursing unit on the level of work related stress experienced by the nurses.

Table 9

Results of Independent t test for Nursing Work Related Stress

Work related Stress	*N*	*t*	*p*
Equal variances assumed	94	-0.208	.836

In summary, nurses working on units that employ Clinical Nurse Leaders experience equivalent levels of work related stress to nurses who work on units that do not employ CNL's. Therefore the data does not support hypothesis one.

Research Hypothesis Number Two

To test hypothesis two,″ Nurses practicing on units with a CNL will exhibit improved Job Satisfaction and self perception of Quality of life compared to nurses practicing on units without a CNL," independent t test were used to test the difference. Job Satisfaction was the first variable investigated the results are reported below.

Table 10 presents the means and the standard deviation for the variable job satisfaction. There is a variance in sample size the CNL (*n*=46), Non-CNL (*n*=48). The group means for the two groups CNL *(M= 110.02, SD ±21.75), Non-CNL (M= 108.66, SD ±23.03)*

Table 10

Sample Means and Standard Deviations for Job Satisfaction

Group	*n*	*M*	*SD*
CNL	46	110.02	21.75
Non-CNL	48	108.66	23.03

Table 11 reports the results of independent t tests. Based on the results of the independent t-test there was no statistical significance (t =0.293, *p* =0.770) between the two groups when measured for job satisfaction. Job satisfaction did not demonstrate a statistically significant difference between the groups due to the presence of the CNL.

Table 11

Results of Independent t test for Job Satisfaction

Job Satisfaction	*N*	*t*	*p*
Equal variances assumed	94	0.293	.770

In addition to the overall scores the subscales for job satisfaction autonomy, control over practice, physician- nurse relations and organizational support were examined.

Table 12 displays the means and standard deviations for the job satisfaction subscales. There was a variance in the sample the CNL (*n*=46), Non-CNL (*n*=48).

The autonomy subscale was CNL *(M= 9.93, SD ±3.10), Non-CNL (M= 9.33, SD ±2.66)*; the control over practice subscale CNL *(M= 14.97, SD ±4.70), Non-CNL (M= 14.50, SD ±4.10).* The means for physician nurse relations for the two groups CNL *(M= 115.63, SD ±9.64), Non-CNL (M= 115.72, SD ±9.88).*and the organizational support subscale was reported as CNL *(M= 4.21, SD ±1.88), Non-CNL (M= 4.41, SD ±2.23).*

Table 12

Means and Standard Deviations for Job Satisfaction Subscales

Job Satisfaction Subscales	*n*	*M*	*SD*
Autonomy			
CNL	46	9.93	3.10
Non-CNL	48	9.33	2.66
Control over Practice			
CNL	46	14.97	4.70
Non- CNL	48	14.50	4.10
Physician –nurse relations			
CNL	46	4.21	1.88
Non-CNL	48	4.41	2.23
Organizational Support			
CNL	46	20.84	6.26
Non-CNL	48	20.25	5.27

Table 13 displays the independent t test results on the job satisfaction subscales and the results are: Autonomy (t=0.100, p=.597), Control over practice (t= 0.526, p =.655), physician- nurse relations (t= -0.486, p = .283) and organizational support (t =0.505 p =.615). There were no significant differences between the two grouped in the job satisfaction subscale

Table 13

Results of Independent t test for the Job Satisfaction Subscales

Job Satisfaction	*N*	*t*	*p*
Autonomy	94	0.100	.597
Control over practice	94	0.526	.655
Physician nurse relations	94	0.505	.283
Organizational support	94	0.505	.615

In summary there was no statistical difference between the two groups on the overall job satisfaction or the job satisfaction subscales

Quality of Life

Table 14 presents the sample, means and the standard deviation for the overall scores on self perceived Quality of life. There is a variance in the sample the CNL (*n*=46), Non-CNL (*n*=48). The means for the two groups were CNL *(M= 115.63, SD ±9.64), Non-CNL (M= 115.72, SD ±9.88).*

Table 14

Sample Means and Standard Deviations for Overall Scores of Quality of Life

Group	*n*	*M*	*SD*
CNL	46	115.63	9.64
Non-CNL	48	115.72	9.88

Table 15 reports the results of independent t tests on the variable self-perceived Quality of life. The independent t-test found no statistical significance in the overall quality of life scores (*t*= -0.049, *p*=0.961) between the two groups. The overall scores for self perceived quality of life did not reveal a difference in the two groups.

Table 15

Results of Independent t test for Overall Scores of Quality of life

Quality of Life	*N*	*t*	*p*
Equal variances assumed	94	-0.049	0.961

In addition to the overall scores the two summary scores physical health (PH) and mental health (MH) are reported. Table 16 reports the mean and standard deviation for the first summary scale physical health (PH) as Group1 CNL *M*=64.02,(*SD*±7.48) and Group 2Non-CNL mean and standard deviation are *M* =65.04,(*SD*±4.84).

Table 16

Means and Standard Deviation for Physical Health Summary Scale

Group	*n*	*M*	*SD*
CNL	46	64.02	7.48
Non- CNL	48	65.04	4.84

Table 17 reports the scores of independent t tests for the summary scales physical health and mental health by group. No statistically significant difference was found for the overall Physical Health summary Scale (t = -0.79, p =0.43).

Table 17

Results of Independent test for Physical Health Summary Scale

Physical Health Summary Scale	*N*	*t*	*p*
Equal variances assumed	94	-0.79	0.43

Means and standard deviation as well as independent t tests are reported on all physical health subscales. The subscales that comprise the Physical Health summary scores are; Physical Functioning (PF), Role Physical (RP), Bodily Pain (BP), and General Health (GH).

Table 18 displays the means and standard deviation for the Physical Health subscales for CNL (n=46); Physical Functioning M=28.01,(SD±5.81), Role Physical M=17.17,(SD±3.84), Bodily Pain M=4.21,(SD±1.88),and general health M=14.52,(SD±2.47).Non-CNL(n=48) means and standard deviation are;

Physical Functioning *M*=27.91,(*SD*±4.27), Role Physical *M*=17.29,(*SD*±2.55), Bodily Pain *M*=4.41,(*SD*±2.23),and General Health *M*=15.41,(*SD*±2.43).

Table 18

Means and Standard Deviation for Physical Health Subscales

Physical Health		*n*	*M*	*SD*
Physical Functioning				
	CNL	46	28.01	5.81
	Non-CNL	48	27.91	2.47
Role Physical				
	CNL	46	17.17	3.84
	Non- CNL	48	17.29	2.55
Bodily Pain				
	CNL	46	4.21	1.88
	Non-CNL	48	4.41	2.23
General Health				
	CNL	46	14.52	2.47
	Non-CNL	48	15.41	2.43

Table 19 displays the results of independent t tests for the subscales of the Physical Health summary score. Physical Functioning (t=0.18, p=.85), Role Physical (t= -0.18, p =.86), Bodily Pain (t= -0.47, p = .64) and General Health (t =-1.77, p =.08). None of the physical health subscales showed and statistically significant difference between the two groups.

Table 19

Results of Independent T Test for Physical Health subscales

Physical Health	*N*	*t*	*p*
Physical Functioning	94	0.18	.85
Role Physical	94	-0.17	.86
Bodily Pain	94	-0.48	.64
General Health	94	-1.77	.08

In summary, the overall Physical Health summary scores did not reveal any difference in the two groups. The individual subscales of Physical Health did not reveal any individual subscale as statistically significant between the two groups. General Health trended toward the CNL group reporting better health than the Non-CNL group.

20. CNL was reported *M*=48.78, (*SD*± 4.99),and the Non-CNL *M*=47.95,(*SD*±8.65)

Table 20

Means and Standard Deviation for Mental Health Summary Score

Group	*n*	*M*	*SD*
CNL	46	48.78	4.99
Non-CNL	48	47.95	8.65

Table 21 displays independent test for the Mental health summary scores the results were (t =0.56, p =0.57) and not found to have a significant difference between the two groups. This indicates that the CNL did produce a difference in the overall mental health of nurses.

Table 21

Results of Independent t test for Mental Health Summary Scores

Mental Health Summary Score	*N*	*t*	*p*
Equal variances assumed	94	0.56	0.57

The subscales that comprise the Mental Health summary score are; vitality (VT), social Functioning (SF), Role emotional (RE), mental health (MH).

Table 22 displays the means and standard deviations for the subscales of the two groups. CNL (*n*=46) vitality *M*=11.65, (*SD*=1.64), social functioning *M*=5.82, (*SD* =.768), role emotional *M*= 13.42, (*SD*=2.28), and mental health *M*=17.86, (*SD*=2.32). Non-CNL (*n*=48) vitality *M*=11.75, (*SD*=2.28), social functioning *M*=6.00, (*SD* =1.33), role emotional *M*= 13.45, (*SD*=8.23), and mental health *M*=16.75, (*SD*=2.32)

Table 22

Means and Standard Deviation for the Mental Health Subscales

Mental Health	*n*	*M*	*SD*
Vitality			
CNL	46	11.65	1.64
Non-CNL	48	11.75	2.28
Social Functioning			
CNL	46	0.77	0.11
Non- CNL	48	1.33	0.19
Role Emotional			
CNL	46	13.43	2.28
Non-CNL	48	13.45	8.23
Mental Health			
CNL	46	17.86	2.32
Non-CNL	48	16.75	2.31

Table 23 displays the results of independent t tests for the subscales of the Mental Health summary score. The results of Vitality (t= - 0.24, p=0.81), Social functioning (t= - 0.77, p =0.44), Role emotional (t= -0.02, p =0 .98 and Mental Health (t = -2.34, p =0.021). Of the mental health subscales only mental health showed a statistically significant difference between the two groups.

Table 23

Results of Independent t test for Mental Health Subscales

Mental Health	*N*	*t*	*p*
Vitality	94	-0.24	.81
Social Functioning	94	-0.77	.14
Role Emotional	94	-0.02	.23
Mental Health	94	2.34	.02

In summary, in this group, the presence of the CNL did not increase job satisfaction, nor did it improve Quality of life for nurses. Of interest, the Physical Health summary scale did not show statistical significance however; the CNL group was more likely to report better general health.

Additionally, the Mental Health summary scale did not identify a statistical difference in the two groups. The mental health subscale was significantly different between the two groups indicating the CNL group was happier and less depressed than the Non-CNL group.

The overall scores did not support hypothesis two. It is important to note that the CNL group showed a perception of better general health, and a statistically significant difference on the mental health subscale indicating the CNL group had a propensity to be happier and less depressed.

Research Hypothesis Number Three

To test hypothesis three,"Nurses practicing in units with a CNL will exhibit a decrease in anticipated turnover compared to nurses practicing in units without a CNL", independent t tests were performed. Table 24 reports the sample, the means and the standard deviation for anticipated turnover. There is a variance in sample size with the CNL (*N*=46), Non-CNL (*N*=48). The group means for the two groups CNL *(M= 47.32, SD ±4.97), Non-CNL (M= 44.70, SD ±7.35)*

Table 24

Sample Means and Standard Deviations for Anticipated Turnover

Group	*n*	*M*	*SD*
CNL	46	47.32	4.97
Non-CNL	48	44.70	7.35

Table 25 reports the results of independent t tests on anticipated turnover. Independent t test results identified a statistically significance difference (*t*=2.01, *p*=0.047) between the two groups. .This indicates the presence of the CNL role on the nursing unit decreases anticipated turnover.

Table 25

Results of Independent t test for Anticipated Turnover

Anticipated Turnover	*N*	*t*	*p*
Equal variances assumed	94	2.01	.047

In summary, nurses that work on units that employ CNL's have a lower incidence of anticipated turnover which supports hypothesis three.

Research Hypothesis Number Four

To test the fourth hypothesis, "A significant relationship exists between anticipated turnover and work-related stress, job satisfaction, and quality of life", multiple regression was utilized to determine how well the independent variables of work related stress, quality of life and job satisfaction explain the variance in anticipated turnover. Statistics examined included the standardized regression coefficients (β values). The F statistic value and statistical significance of F was also examined. Preliminary screening of the data set including checks for normality in variable distributions, outliers, and multicollinearity were discussed earlier in this chapter and will not be repeated here. Table 26 contains the summary obtained from standard multiple regression analysis of regressing on the independent variable of anticipated turnover and reports the relationship through a multiple regression on the research variables anticipated turnover with group and the variables of job satisfaction, quality of life and nursing work related stress.

Table 26

Summary of Regression Analysis for Predicting Anticipated Turnover

Variables	*b*	*β*	*t*	*p*
Constant	53.56		5.58	.000
Group	-2.50	-0.196	-2.00	.048
Work Related Stress	-0.166	-0.314	-3.14	.002
Quality of Life	0.063	-0096	0.96	.339
Job Satisfaction	0.026	0.090	0.88	.380

Note: Dependent variable: Anticipated Turnover.

Multiple regression revealed, when controlling for the variables of work related stress, quality of life and job satisfaction, that was a statistically significant relationship between group CNL(p=.048), anticipated turnover work related stress (p=.002. Therefore hypothesis four was supported.

In summary hypotheses one, and two were not supported, however hypothesis three was significant. Additionally, work related stress and the CNL group were strong predictors of a significant relationship with Anticipated Turnover.

Chapter Five

Discussion, Conclusions, and Recommendations

This chapter presents the summary of the study, discussion of the findings, conclusions, implications and recommendations for future research. This study attempted to explore the relationship that implementation of the Clinical Nurse Leader role has with the nurses working on acute care nursing units. In particular, the study sought to answer the question; does utilization of the CNL role decrease nursing work related stress, improve job satisfaction, quality of life and decrease anticipated turnover? This research also investigated the relationships among the variables.

Summary of the Study

This study was a quasi-experimental design. The sample of 94 RN's met the criteria for participation. Participants were working on selected units that were chosen by the PI as either employing a CNL or not employing a CNL. Additionally, they were able read, write and speak the English language. All participants were designated by group. Group1 consisted of nurses employed on units with CNLs. Group 2 were nurses on units without CNLs. Ninety four participants (N=94) completed demographic data forms as well as the Nursing Stress Scale, the Nursing Work related Index- Revised, the Medical Outcomes Survey short form (SF-36), and the Anticipated Turnover Scale.

Descriptive data for the sample were obtained with frequencies, percentages, means, standard deviations and ranges. The sample included 46 (49%) in Group 1 with CNLs, and 48 (51%) nurses on units without CNLs in Group 2. The sample

predominately represented white (79%), married (47%), and female (82%) nurses. Their educational preparation was predominately Associate's degree (56%) and (75%) reported they worked full- time. The mean age of respondents was 42, the mean number of years practicing as nurse was12 years with 7 years being the mean time at the current hospital and 5 years being the mean time on the current nursing unit.

To determine if there was any relationship with the CNL role and work related stress, job satisfaction, quality of life and anticipated turnover, three hypotheses were proposed. Independent t tests were used to examine these hypotheses. Additionally, a fourth hypothesis was proposed to identify if any relationship exists between the variables of anticipated turnover, work- related stress and job satisfaction, quality of life and the presence of the CNL. Multiple regression analysis was used to determine if any relationship exists.

Discussion and Conclusions

The following is a discussion of the findings according to the four research hypotheses in the study. Conclusions that might be drawn from this research are presented in this section.

In the American Hospital Associations committee report, *In Our Hands: How Hospital Leaders can build a thriving Workforce* (2002) ,one recommendation was to create a professional role for retaining nurses, that would keep the most qualified nurses at the bedside. This report was cited in the original white paper from AACN used for creating the curriculum for the role of the CNL (CNL, 2003). An important problem to be investigated was how the role of the Clinical Nurse Leader related to work related stress, quality of life, job satisfaction and anticipated turnover on acute care nursing units. This

research also examined the relationship of the CNL role, the variables and RNs on acute care nursing units. Additionally, this research examined the variable of work related stress, job satisfaction, and quality of life to identify if they were predictors of anticipated turnover. This research is unique because it is one of the few studies on the CNL role, which was developed by the American Association of Colleges of Nursing (AACN) in response to needed changes in the practice of nursing in the acute care setting.

The participants in this research were 94 RNs practicing on acute care nursing units in three non- profit hospitals. The demographics demonstrated the sample to be predominately female, white, and married RNs. The demographics of this study were similar to the preliminarily results from the *2008 National Sample Survey* of nurses performed by the federal division of Nursing. The national sample reported an average age of 47 years, primarily female nurses (HRSA, 2010).

This study was purposeful because the University of South Florida was one of the early educational institutions to graduate students from this curriculum and the study hospitals were some of the first in the Tampa, Florida area to utilize the role on nursing units. This also is one of the first research studies to examine this role in relationship to very important outcomes

The first hypothesis stated that nurses practicing on units that employ CNL will have lower levels of work related stress. This was tested using independent t tests to examine the relationship of nursing work related stress (NSS) and the CNL role. The results of the Nursing Stress Scale tool did not demonstrate the addition of the role of CNL statistically changed the level of stress of nurses on these units. This study did not demonstrate any statistical significance in work related stress on the units employing

CNLs. Interesting to note, the mean score on the Nursing Stress Scale for the CNL group was 83.45 out of a possible 102 and for the Non-CNL group the mean was 83.97. While there is no statistical significance between the groups, the means demonstrate that both groups experienced a high level of stress related to nursing work. However, the CNL group stress level was slightly less than the Non- CNL group. The findings of this study are consistent with previous literature which is replete with examples of stress in acute care nursing settings (Begat, 2005; Chang, 2006; Fletcher, 2001; Hall, 2004; Hayes, 1999; Lambert, 2004; McNeely, 2005; McVicar, 2003; Oloffson 2003; Piko, 2006; Ruggerio, 2005; Santos, 2003; Stichler, 2009; Sveinsdotter, 2005; Zeytinoglu, 2005). Therefore the first hypothesis that states –″ nurses practicing on units with a CNL's will exhibit a decrease in work-related stress compared to nurses practicing in units" was not supported.

The second hypothesis used independent t tests to explore two of the variables; job satisfaction (NWIR) and self perceived quality of life (SF-36). Specifically, what effect is experienced by the presence of the CNL? Job satisfaction was the first variable explored. In research by Aiken(2000) utilizing the NWIR the four subscales(,1) autonomy,(2) control over practice,(3) nurse physician relations, and(4) organizational support were identified as factors that influence job satisfaction. In another study using meta-analysis nurses' job satisfaction, showed a strong relationship between job satisfaction and autonomy (Blegen, 1993). In this current study the NWIR subscales of job satisfaction, autonomy, control over practice and organizational support did not reveal any statistical difference between the two groups. It was expected that job satisfaction would be higher in the CNL group. However, job satisfaction scores were

similar between the CNL and Non-CNL groups and did not demonstrate any statistical significance.

The second variable examined in hypothesis two; was quality of life. Independent t tests on overall quality of life scores did not report a difference in the two groups. It was hypothesized that quality of life scores for the CNL group might be higher due to the presence of the CNL. Total summary scores for the physical and mental health scales did not show a statistical difference between the two groups. Analysis of the subscales did, however, reveal a statistical difference in mental health with CNL group reporting they were happier and calmer when compared with the Non-CNL group. The differences in scores on general health subscale were not statistically significant between the CNL and the Non-CNL groups, although the scores trended toward the CNL group reporting a better perception of health. Previous research conducted using the Nurses' Health Study Database and the Medical Outcomes study short form(SF-36) concluded that modifying health behaviors and establishing social networks were keys elements in improving individual nurses perception of quality of life (Michael, 2000). This research does not examine health behaviors or social networking. However, one possible explanation for the difference in perception of general health and the significant difference in mental health scores may be the social support the CNL role provides on the nursing unit.

This is supported by current research by Shader(2001) who reported that social support and group cohesion decreased stress, improved job satisfaction and decreased turnover. One study on healthy working environments reported that healthful workplaces created healing environments for patients and impacted provider outcomes of health, stress, satisfaction, organizational commitment and turnover (Stichler, 2009). The role of

the CNL is supportive and may be viewed as additional social support that fosters a healthy work environment. Overall, the results of the analysis of hypothesis two, nurses practicing in units with a CNL will exhibit increased job satisfaction and improved perception of quality of life compared to nurses practicing in units without a CNL was not supported. Therefore in this study the two parts of hypothesis two were not supported.

The third hypothesis was also tested using independent t tests. The third hypothesis explored whether nurses practicing on units with a CNLs exhibited a decrease in anticipated turnover when compared with nurses practicing on units without a CNL. The overall mean scores for the Anticipated Turnover Scale revealed a significant difference indicating that the non-CNL group members were more likely to leave nursing. This is consistent with previous research conducted by Janssen (1999) showing a positive relationship between job contentment, support of colleagues, and job motivation. Consequently, the role of the CNL may be a factor influencing the nurses feeling of support from colleagues that in turn results in a decrease in anticipated turnover. Organizational participation in employment of the CNL role was explored in a grounded theory study conducted by Sherman (2008). In this study five major factors were identified as effecting chief nursing officer's decisions to engage in the CNL project. The five factors included ;(1) organizational needs, (2) opportunity to redesign care delivery (3), desire to improve patient care,(4) enhancement of physician- nurse relationships; and (5) promoting professional development. This research demonstrates that organizational support is a necessary component of decreased turnover. This has significant economic implications for hospitals that employ CNL

The fourth hypothesis of this research explored whether work-related stress, job satisfaction, and quality of life have a relationship with anticipated turnover. Standard multiple regression was used to analyze this data. The results of the multiple regression analyses revealed that a significant relationship existed between anticipated turnover and nursing work related stress and the presence of the clinical nurse leader. This is consistent with previous literature by Aiken and Hayes (2001, 2005) which determined that the effects of work-related stress are low job satisfaction, high turnover, and poor patient outcomes and these are factors contributing to increased turnover. Therefore the fourth hypothesis was supported.

In summary, the logic model (Figure 1) reported in the third chapter of this research proposed that the presence of the CNL on the nursing unit would decrease work related stress and anticipated turnover while increasing job satisfaction and self perceived quality of life. While there was no statistically significant difference in the two groups related to work related stress, standard multiple regression revealed a significant relationship exists between the presence of the CNL and work related stress as well as anticipated turnover. Anticipated turnover showed a significant difference between the two groups. However, the research did not find any significant difference in job satisfaction and quality of life that is attributable to the presence of the CNL.

Implications for Nursing

The implications drawn from this quasi-experimental study is presented in this section. The findings of this study have implications for nurses, nurse educators, and for further research. In chapter two the literature demonstrated there is evidence of increased stress, decreased job satisfaction and quality of life as well as e increased anticipated turnover. However, there is a lack of research on implementation of studies to alleviate these negative factors affecting the profession of nursing. This research is intended to determine if the CNL role could in anyway be positive influence in the acute care setting. While this study cannot definitively be used to show the role as affecting the negative variables, it does propose that additional research in to the CNL role would prove beneficial.

The nursing profession has had periodic shortages of nurses practicing at the bedside over the last several decades. Often, economic factors have influenced nurse's return to the bedside only to have the shortage recur when economic circumstances change (Buerhaus, 2009). The factors that precipitate an individual nurse's decisions to leave the bedside have not changed. In order for the profession to stop the cyclic shortages from reoccurring, more research that is needed to identify factors that support bedside acute care nursing.

The AACN curriculum for the CNL used research to support implementation of this curriculum (CNL, 2003) As additional research is completed related to the efficacy of the role, the AACN will need to consider the results of subsequent research in supporting and redefining the CNL curriculum in the future.

A healthcare reform billed was recently signed into legislation (HR: 4872), Reconciliation Act of 2010 which provides increased accessibility of health care to the currently uninsured. This bill challenges the profession of nursing to explore opportunities to support the existing nursing workforce and to provide additional resources to accommodate the needs of both patients and nurses. Research conducted regarding the impact of healthcare reform proposes a mechanism for supporting and promoting nursing through improving the environments in which nurse's work. Politicians have a plan to improve workplace conditions for nurses through federal challenge grants to support magnet hospitals with better work environments. A shortage of acute care bedside nurses is reported to be related to burnout, stress, and fatigue associated with an unfavorable nursing practice environment and has been well documented (McHugh, Aiken, Cooper, 2008).

The CNL role may be one of the venues the nursing profession chooses to advocate as a tool to decrease the rate at which nurses leave the profession. Nursing has a responsibility at this time to look introspectively at the needs of the current workforce, among them the nurses in the acute care setting who are struggling on a daily basis to provide safe quality care. There needs to be a collective professional assessment to identify the needs of the current nurses and a prospective plan for future nurses to ensure that the care givers interacting with patients on a daily basis are able to have their needs meet in order to be able to meet the needs of the patients.

Through this study it has been consistently demonstrated that the acute care nursing environment is stressful, there are many factors that can be attributed to the causation. However, also apparent in the literature review while these factors have been

repeatedly studied very little research has been produced on ameliorating interventions, to assist with turnover and work-related stress..

While this research certainly cannot claim to be a demonstration of an intervention that has the ability to fix any of the clearly defined factors of work related stress, job satisfaction, and quality of life and anticipated turnover, this researcher believes it is crucial for the nursing profession to engage in this type of introspection and make bold attempts at interventions like implementation of the CNL role to address the current state and the future state of nursing. The CNL role in this study showed that it may be influential in improving the work- related stress and the turnover on nursing units The continued study of the CNL role is essential for nursing, for patient care and the overall quality of healthcare provided in our nation.

Recommendation for Future Research

Based on the review of the literature and this research study, the following recommendations are made for future research.

1. Potential areas for future study include replicating this study using a larger sample, in multiple demographic populations. Additionally, expanding the sample to specialty nursing units; in particular critical care.
2. Further investigation of the CNL role and identifying the individual unit characteristics to determine if a specific type of acute care nursing unit plays a factor in the research findings
3. Continued development and refinement of instruments that address the impact of the CNL role on work related stress and job satisfaction.
4. Investigation of the CNL specific attributes that may be predicting factors for decreasing turnover. Additionally, qualitative research would be useful to identify the themes surrounding the variables
5. Further study that identifies the specific characteristics of anticipated turnover and work related stress that the CNL role effects
6. Further study in the area of anticipated turnover. Further research in this area may assist in explaining the role demands that are influencing the decision to leave a unit or the role of nursing.
7. Further research in this area should attempt to expand on these findings by examining the major sources of work related stress, low job satisfaction, nurse's perception of overall quality of life and intention to leave the role.

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Ann C. Greiner, Elisa Knebel, Editors, Committee on the Health Professions Education Summit: Health Professions Education: A Bridge to Quality**.** ISBN: 978-0-309-08723-0,

Health Care at the Crossroads**:** Strategies for Addressing the Evolving Nursing Crisis. www.aacn.nche.edu/media/pdf/JCAHO8-02.pdf

H.R.4872. 111th Cong. 2nd s. Health Care and Education Reconciliation Act of 2010. *An Act to provide for reconciliation pursuant to Title II of the concurrent resolution on the budget for fiscal year 2010 (S. Con. Res. 13*).

Appendices

Appendix A: IRB Approval

USF
UNIVERSITY OF
SOUTH FLORIDA

January 24, 2008

Mary Hadsell
1620 Crossvine Ct
Trinity FL 34655

RE: **Exempt Certification** for IRB#: 106522G
Title: *Examining the Differences in Work Related Stress, Qualify of Life, Job Satisfaction and Anticipated Turnover on Nursing Units with Clinical Nurse Leaders and Those Without*

Dear Mary Hadsell:

On January 18, 2008, the Institutional Review Board (IRB) determined that your research **meets USF requirements and Federal Exemption criteria number two (2) - Educational tests, survey procedures, interview procedures or observation of public behavior. USF IRB accepted informed consent documents for St. Lucie Medical Center, Morton Plant Mease Dunedin, and St. Martin Health Systems.** It is your responsibility to ensure that this research is conducted in a manner reported in your application and consistent with the ethical principles outlined in the Belmont Report and with USF IRB policies and procedures.

Please note that changes to this protocol may disqualify it from exempt status. It is your responsibility to notify the IRB prior to implementing any changes.

The Division of Research Integrity and Compliance will hold your exemption application for a period of five years from the date of this letter or for three years after a Final Progress Report is received. If you wish to continue this protocol beyond those periods, you will need to submit an Exemption Certification Request form at least 30 days before this exempt certification ends. If a Final Progress Report has not been received, the IRB will send you a reminder notice prior to end of the five year period; therefore, it is important that you keep your contact information current with the IRB Office. Should you complete this study prior to the end of the five-year period, you must submit a Final IRB Progress Report for review.

Please reference the above IRB protocol number in all correspondence to the IRB c/o the Division of Research Integrity and Compliance. In addition, we have enclosed an Institutional Review Board (IRB) Quick Reference Guide providing guidelines and resources to assist you in meeting your responsibilities when conducting human subjects research. **Please read this guide carefully.**

OFFICE OF RESEARCH • DIVISION OF RESEARCH INTEGRITY & COMPLIANCE
INSTITUTIONAL REVIEW BOARDS, FWA NO. 00001669
University of South Florida • 12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
(813) 974-5638 • FAX (813) 974-5618

AppendixA: IRB Approval (continued)

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-9343.

Sincerely,

Paul G. Stiles, J.D., Ph.D., Chairperson
USF Institutional Review Board

Enclosures: IRB Quick Reference Guide

Cc: bb/Norma Epley, USF IRB Professional Staff

SB-EXEMPT-0602

AppendixB: IRB Modification

USF
UNIVERSITY OF
SOUTH FLORIDA

DIVISION OF RESEARCH INTEGRITY AND COMPLIANCE
Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
(813) 974-5638 • FAX (813) 974-5618

October 8, 2008

Mary Hadsell, RN, MSN
College of Nursing
7348 Jasmine Dr.
New Port Richey, FL 34655

RE: **Exempt Certification** Modification Request
IRB#: 106522 G
Title: *Examining the Differences in Work Related Stress, Qualify of Life, Job Satisfaction and Anticipated Turnover on Nursing Units with Clinical Nurse Leaders and Those Without*

Dear Ms. Hadsell:

On January 18, 2008, it was determined that your project referenced above meets the federal criteria, which exempts it from further IRB oversight.

You have requested the following changes to your research:

1. Revised adult informed consent form
2. Revised recruitment procedures: Instead of participants having to complete the questionnaires at the time of recruitment, they can take the questionnaires home to complete and mail them back. Self-addressed stamped envelopes will be provided.

On October 3, 2008, the IRB Chairperson reviewed your request and determined this change does not impact the study's eligibility for exemption. The study continues to meet Exempt Criteria. Any grants supporting this project must be submitted to the Institutional Review Board for review.

Please note that future changes to this protocol may disqualify it from its current exempt status. It is your responsibility to notify the IRB prior to implementing any changes.

Please reference the above IRB protocol number in all correspondence to the IRB c/o the Division of Research Integrity and Compliance. It is your responsibility to ensure that this research is conducted in a manner consistent with the ethical principles outlined in the Belmont Report and with USF IRB policies and procedures.

Appendix B: IRB Modification

(continued)

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-9343.

Sincerely,

Paul G. Stiles, J.D., Ph.D., Chairperson
USF Institutional Review Board

Cc: Anna Davis/cd, USF IRB Professional Staff
Cecile Lengacher, PhD,MSN

SB-EXEMPT-MOD-0801

Appendix C: Informed Consent

MORTON PLANT MEASE
INFORMED CONSENT FORM (ADULT)
Information for People Who Take Part in Research Studies

Title of Study: Examining the differences in work related stress, quality of life and job satisfaction on nursing units utilizing Clinical Nurse Leaders and units that do not have CNL's

Study Sponsor: University of South Florida, College of Nursing Doctoral Dissertation

Principal Investigator: Mary Hadsell,RN,MSN

Co-Investigators: N/A

Study Location(s):Morton Plant Mease

GENERAL INFORMATION ABOUT THE RESEARCH STUDY

The following information is being presented to help you decide whether or not you want to be a part of a research study. Please read all the information carefully. Anything you do not understand, ask the Principal investigator.

You may want a friend or family member to read this form and talk to the principal investigator with you. You can also talk to your nurse leader about whether or not you should take part in the study. Talking things over can help you make the right choice.

The time you will need to spend in this research study will vary it requires completion of 4 short quesdtionairres and a demographic form.

The number of people that might take part in this study throughout the state is: 128

PURPOSE AND BACKGROUND

The purpose of this study is to examine the differences in work-related stress, job satisfaction, quality of life and anticipated turnover on nursing units utilizing the Clinical Nurse Leader (CNL) role and on nursing units without CNL's.

Exploring how the Clinical Nurse Leader influences these factors could enable the profession of nursing to mitigate the negative effects of work related stress, poor job satisfaction and improve perceptions quality of life resulting in retaining nurses.

BENEFITS OF BEING A PART OF THIS RESEARCH STUDY

Appendix C: Informed Consent (continued)

We cannot tell whether or not you will benefit from participation in this study and we cannot guarantee any positive results. You may receive little or no benefit from participating. It is hoped that the additional information gained in this trial may be useful in improving work related stress, quality of life and job satisfction for nurses, as well as decreasing turnover

RISKS OF BEING A PART OF THIS RESEARCH STUDY
There is no risk involved in particpating in this study.

COSTS OF BEING A PART OF THIS RESEARCH STUDY
There is no cost to participate in this study

CONFIDENTIALITY OF YOUR RECORDS

While you are participating in this study a record of your resp0nses while on this study will be kept in a confidential form with Mary Hadsell (principal Investigator) who will add this information to a computer file. The confidentiality of any central computer record will be carefully guarded and no information by which you can be identified will be released or published.

Your research records will be kept confidential to protect your privacy to the full extent of the law. However, by participating in this study, you authorize research investigators, to inspect the research records at the University of South Florida, College of Nursing. They also have the right to review information collected for this study and to verify how the study is conducted.

The results of this research study may be published, but they will not include your name or any other personal information that may identify you.

VOLUNTEERING TO BE PART OF THIS RESEARCH STUDY

Your participation in this study is completely voluntary. You may decide not to participate or you may withdraw from the study at any time without penalty and without consequences.

The prinicpal investigator can also withdraw you from the research study at any time without your consent if they think it is in your best interest to stop, if you do not seem to be benefiting from treatment, or if the sponsor stops the study early

QUESTIONS AND CONTACTS

If you have any questions about this research study, you can contact Mary Hadsell, RN, MSN 727 376 8796.

CONSENT

Appendix C: Informed Consent (continued)

By signing this form, I agree that:

- ❑ I have fully read and understood
- ❑ I have had read to me and understood
- ❑ I have had fully explained to me in my native language and understood

this informed consent form describing the research study .

I was given the opportunity to question the Prinicpal Investigator in charge of this research study and I have received satisfactory answers.

I was given the opportunity to discuss this research study with a person of my own choice who is not involved, in any way, with this research study.

I have understood the risks, benefits, and alternatives of participating in this research study.

I have not been unduly influenced to participate in this research study.

The Principal Investigator has made no guarantee or assurance as to the results that may be obtained as a result of participating in this research study.

I have been given a signed copy of this informed consent form that is mine to keep.

I freely give my informed consent to participate in the research study described in this form.

Signature of Participant	Printed Name of Participant	Date
Signature of Person Explaining Consent	**Printed Name of Person Explaining Consent**	**Date**
Signature of Witness (if applicable)	**Printed Name of Witness**	**Date**

(My signature as a witness indicates that I have witnessed the explanation of the informed consent and attest to the clear presentation and apparent understanding of the study by the participant. Any questions that were asked, were answered to my satisfaction.)

INVESTIGATOR'S STATEMENT

AppendixC :Informed Consent (continued)

I have carefully and thoroughly explained to the participant the nature of the research study described in this form. I hereby certify that, to the best of my knowledge, the participant signing this informed consent form understands the nature, demands, risks and benefits involved in participating in this study and that a medical problem, language or educational barrier has not precluded a clear understanding of the participant's involvement in this study.

_____	_____	_____
Signature of Investigator	**Printed Name of Investigator**	**Date**

This research project/study and informed consent form were reviewed and approved by theMorton Plant Mease Institutional Review Board for the protection of human subjects. This approval is valid for one year from the date provided below.

IRB Approval Date: _____

(Informed Consent Revised): _____

Appendix D: Demographic Data Form

Demographic Data

Please fill in blank or circle most appropriate answer

UNIT_____

1. Age _____

2. Sex

    a. Male
    b. Female

3. Number of years in nursing _____

4. Education in Nursing

    a. Diploma
    b. Associates
    c. Bachelors
    d. Masters
    e. Other _____

5. Nursing Certification(s) _____

6. Length of employment at this hospital _____

7. Length of employment on this unit _____

8. Work Status

    a. Full- time
    b. Part-time
    c. Per diem or pool
    d. agency
    e. seasonal

Appendix D: Demographic Data Form (continued)

f. Other _____

9. Marital Status

a. Married
b. Single
c. Divorced
d. Widowed
e. Other _____

10. Children

a. Yes
b. No

11. Number of Children _____

12. Ethnicity

a. White, not Hispanic
b. White, Hispanic
c. Black, not Hispanic
d. Black, Hispanic
e. Chinese
f. Japanese
g. Filipino
h. Native American, Eskimo or Aleutian
i. Hawaiian
j. Korean
k. Vietnamese
l. Don't Know
m. Other _____

Appendix E: Multiple Outcomes Short Form Inventory (SF 36)

Your Health and Well-Being

This survey asks for your views about your health. This information will help keep track of how you feel and how well you are able to do your usual activities. ***Thank you for completing this survey!***

For each of the following questions, please mark an ☒ in the one box that best describes your answer.

1. **In general, would you say your health is:**

Excellent	Very good	Good	Fair	Poor
☐1	☐2	☐3	☐4	☐5

2. **<u>Compared to one year ago</u>, how would you rate your health in general <u>now</u>?**

Much better now than one year ago	Somewhat better now than one year ago	About the same as one year ago	Somewhat worse now than one year ago	Much worse now than one year ago
☐1	☐2	☐3	☐4	☐5

Appendix E: Multiple Outcomes Short Form Inventory (SF 36) (continued)

3. The following questions are about activities you might do during a typical day. Does <u>your health now limit you</u> in these activities? If so, how much?

	Yes, limited a lot	Yes, limited a little	No, not limited at all
a. <u>Vigorous activities</u>, such as running, lifting heavy objects, participating in strenuous sports	☐ 1	☐ 2	☐ 3
b. <u>Moderate activities</u>, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf	☐ 1	☐ 2	☐ 3
c. Lifting or carrying groceries	☐ 1	☐ 2	☐ 3
d. Climbing <u>several</u> flights of stairs	☐ 1	☐ 2	☐ 3
e. Climbing <u>one</u> flight of stairs	☐ 1	☐ 2	☐ 3
f. Bending, kneeling, or stooping	☐ 1	☐ 2	☐ 3
g. Walking <u>more than a mile</u>	☐ 1	☐ 2	☐ 3
h. Walking <u>several hundred yards</u>	☐ 1	☐ 2	☐ 3
i. Walking <u>one hundred yards</u>	☐ 1	☐ 2	☐ 3
j. Bathing or dressing yourself	☐ 1	☐ 2	☐ 3

Appendix E: Multiple Outcomes Short Form Inventory (SF 36)(continued)

6. **During the <u>past 4 weeks</u>, to what extent has your <u>physical health or emotional problems</u> interfered with your normal social activities with family, friends, neighbors, or groups?**

Not at all	Slightly	Moderately	Quite a bit	Extremely
☐1	☐2	☐3	☐4	☐5

7. **How much <u>bodily</u> pain have you had during the <u>past 4 weeks</u>?**

None	Very mild	Mild	Moderate	Severe	Very Severe
☐1	☐2	☐3	☐4	☐5	☐6

8. **During the <u>past 4 weeks</u>, how much did <u>pain</u> interfere with your normal work (including both work outside the home and housework)?**

Not at all	A little bit	Moderately	Quite a bit	Extremely
☐1	☐2	☐3	☐4	☐5

Appendix E: Multiple Outcomes Short Form Inventory (SF 36) (continued)

9. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks...

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
a Did you feel full of life?	☐1	☐2	☐3	☐4	☐5
b Have you been very nervous?	☐1	☐2	☐3	☐4	☐5
c Have you felt so down in the dumps that nothing could cheer you up?	☐1	☐2	☐3	☐4	☐5
d Have you felt calm and peaceful?	☐1	☐2	☐3	☐4	☐5
e Did you have a lot of energy?	☐1	☐2	☐3	☐4	☐5
f Have you felt downhearted and depressed?	☐1	☐2	☐3	☐4	☐5
g Did you feel worn out?	☐1	☐2	☐3	☐4	☐5
h Have you been happy?	☐1	☐2	☐3	☐4	☐5
i Did you feel tired?	☐1	☐2	☐3	☐4	☐5

10. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc.)?

All of the time	Most of the time	Some of the time	A little of the time	None of the time
☐1	☐2	☐3	☐4	☐5

Appendix E: Multiple Outcomes Short Form Inventory (SF 36)

11. How TRUE or FALSE is <u>each</u> of the following statements for you?

	Definitely true	Mostly true	Don't know	Mostly false	Definitely false
a. I seem to get sick a little easier than other people	☐1	☐2	☐3	☐4	☐5
b. I am as healthy as anybody I know	☐1	☐2	☐3	☐4	☐5
c. I expect my health to get worse	☐1	☐2	☐3	☐4	☐5
d. My health is excellent	☐1	☐2	☐3	☐4	☐5

THANK YOU FOR COMPLETING THESE QUESTIONS!

Appendix F: Nursing Work Index- Revised

Nursing Work Index- Revised

For each item in this section, please indicate the extent to which you agree that the following items *are present in your current job.* Indicate your degree of agreement by circling the appropriate number.

Present in Current Job	*Strongly agree*	*Somewhat agree*	*Somewhat disagree*	*Strongly disagree*
1. Adequate support services allow me to spend time with my patients.	1	2	3	4
2. Physicians and nurses have a good working relationship.	1	2	3	4
3. A good orientation for newly employed nurses.	1	2	3	4
4. A supervisory staff that is supportive of nurses.	1	2	3	4
5. A satisfactory salary.	1	2	3	4
6. Nursing controls it's own practice.	1	2	3	4
7. Active in-services /continuing education programs for nurses.	1	2	3	4
8. Career development / clinical ladder opportunity.	1	2	3	4
9. Opportunity for staff nurses to participate in policy decisions.	1	2	3	4
10. Support for new and innovative ideas about patient care.	1	2	3	4
11. Enough time and opportunity to discuss patient care problems with other nurses.	1	2	3	4
12. Enough registered nurses on staff to provide quality patient care.	1	2	3	4
13. A manger who is a good mentor and leader.	1	2	3	4
14. A chief nursing officer is highly visible and accessible to staff.	1	2	3	4
15. Flexible or modified schedules are available.	1	2	3	4
16. Enough staff to get the work done.	1	2	3	4
17. Freedom to make important patient care and work decisions.	1	2	3	4
18. Praise and recognition for a job well done.	1	2	3	4
19. Clinical nurse specialists who provide patient care consultation	1	2	3	4
20. Team nursing as the nursing delivery system.	1	2	3	4
21. Total patient care as the nursing delivery system.	1	2	3	4

Appendix F: Nursing Work Index- Revised (continued)

Present in Current Job	*Strongly agree*	*Somewhat agree*	*Somewhat disagree*	*Strongly disagree*
46. Opportunity to work on a highly specialized unit.	1	2	3	4
47. Written, up-to-date care plans for all patients.	1	2	3	4
48. Patient care assignments foster continuity of care(i.e. the same nurse cares for the same patient from one day to the next)	1	2	3	4
49. Regular permanently assigned staff nurses never have to float to another unit.	1	2	3	4
50. Staff nurses actively participate in developing their work schedules (i.e. what days they work, days off, etc).	1	2	3	4
51. Standardized policies, procedures, and way of doing things.	1	2	3	4
52. Use of nursing diagnosis.	1	2	3	4
53. Floating so staffing is equalized among units.	1	2	3	4
54. Each nursing unit determines it's policies and procedures.	1	2	3	4
55. Use of problem oriented medical record.	1	2	3	4
56. Working with experienced nurses who" know" the hospital.	1	2	3	4
57. Nursing care plans are verbally transmitted from nurse to nurse.	1	2	3	4

Note: The autonomy subscale includes items 4, 6, 17, 24 and 35.

The control over practice setting subscale items 1, 11, 12, 13, 16, 46 and **48**.

The nurse physician relationship subscale items 2, 27 and 39.

The organizational support subscale includes items 1, 2, 6,11,12,13,17,24,27 and **48**.

Appendix G: Nursing Stress Scale

Nursing Stress Scale

P. Gray-Toft and J. G. Anderson

Directions: Below is a list of situations that commonly occur in a hospital unit. For each item indicate by means of a check how often in your present unit you have found the situation to be stressful. Your responses are strictly confidential.

1. Breakdown of the computer.
   - ___ (1) Never
   - ___ (2) Occasionally
   - ___ (3) Frequently
   - ___ (4) Very frequently
2. Criticism by a physician.
   - ___ (1) Never
   - ___ (2) Occasionally
   - ___ (3) Frequently
   - ___ (4) Very frequently
3. Performing a procedure that patients experience as painful.
   - ___ (1) Never
   - ___ (2) Occasionally
   - ___ (3) Frequently
   - ___ (4) Very frequently
4. Feeling helpless in the case of a patient who fails to improve.
   - ___ (1) Never
   - ___ (2) Occasionally
   - ___ (3) Frequently
   - ___ (4) Very frequently

1

Appendix G: Nursing Stress Scale
(continued)

5. Insufficient opportunities to express my anger and frustration.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

6. Conflict with a supervisor.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

7. An emergency situation involving the life of a patient.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

8. Listening or talking to a patient about his/her approaching death.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

9. Lack of an opportunity to talk openly with other unit personnel about problems on the unit.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

2

Appendix G: Nursing Stress Scale
(continued)

10. The death of a patient.
    - ___ (1) Never
    - ___ (2) Occasionally
    - ___ (3) Frequently
    - ___ (4) Very frequently

11. Conflict with a physician.
    - ___ (1) Never
    - ___ (2) Occasionally
    - ___ (3) Frequently
    - ___ (4) Very frequently

12. Fear of making a mistake in treating a patient.
    - ___ (1) Never
    - ___ (2) Occasionally
    - ___ (3) Frequently
    - ___ (4) Very frequently

13. Lack of an opportunity to share experiences and feelings with other personnel on the unit.
    - ___ (1) Never
    - ___ (2) Occasionally
    - ___ (3) Frequently
    - ___ (4) Very frequently

14. The death of a patient with whom you developed a close relationship.
    - ___ (1) Never
    - ___ (2) Occasionally
    - ___ (3) Frequently
    - ___ (4) Very frequently

3

Appendix G: Nursing Stress Scale (continued)

15. Physician not being present when a patient dies.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

16. Disagreement concerning the treatment of a patient.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

17. Feeling inadequately prepared to help with the emotional needs of a patient's family.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

18. Lack of an opportunity to express to other personnel on the unit my negative feelings toward patients.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

19. Inadequate information from a physician regarding the medical condition of a patient.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

4

Appendix G: Nursing Stress Scale (continued)

20. Inadequate preparation for the job I'm expected to do.
    - ___ (1) Never
    - ___ (2) Occasionally
    - ___ (3) Frequently
    - ___ (4) Very frequently

21. Being asked a question by a patient for which I do not have a satisfactory answer.
    - ___ (1) Never
    - ___ (2) Occasionally
    - ___ (3) Frequently
    - ___ (4) Very frequently

22. Making a decision concerning a patient when the physician is unavailable.
    - ___ (1) Never
    - ___ (2) Occasionally
    - ___ (3) Frequently
    - ___ (4) Very frequently

23. Floating to other units that are short-staffed.
    - ___ (1) Never
    - ___ (2) Occasionally
    - ___ (3) Frequently
    - ___ (4) Very frequently

24. Watching a patient suffer.
    - ___ (1) Never
    - ___ (2) Occasionally
    - ___ (3) Frequently
    - ___ (4) Very frequently

5

Appendix G: Nursing Stress Scale (continued)

25. Difficulty in working with a particular nurse (nurses) outside the **unit.**

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

26. Having to deal with a particularly demanding, angry or depressed patient.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

27. Feeling inadequately prepared to help with the emotional needs of a patient.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

28. Criticism by a supervisor.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

29. Unpredictable staffing and scheduling.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

6

Appendix G: Nursing Stress Scale (continued)

30. A physician ordering what appears to be inappropriate treatment for a patient.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

31. Too many nonnursing tasks required, such as clerical work.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

32. Not enough time to provide emotional support to a patient.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

33. Difficulty in working with a particular nurse (or nurses) on the unit.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

34. Not enough time to complete all of my nursing tasks.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

7

Appendix G: Nursing Stress Scale (continued)

35. The discharge of a patient with whom you developed a close relationship.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

36. A physician not being present in a medical emergency.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

37. Not knowing what a patient or a patient's family ought to be told about the patient's medical condition and its treatment.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

38. Uncertainty regarding the operation and functioning of specialized equipment.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

39. The death of a young patient.

___ (1) Never
___ (2) Occasionally
___ (3) Frequently
___ (4) Very frequently

8

Appendix G: Nursing Stress Scale (continued)

40. Not enough staff to adequately cover the **unit**.

___ (1) Never

___ (2) Occasionally

___ (3) Frequently

___ (4) Very frequently

Appendix H: Anticipated Turnover Scale

Anticipated Turnover Scale
A. S. Hinshaw and J. R. Atwood

Directions: For each item below, circle the appropriate response. Be sure to use the full range of responses (Agree Strongly to Disagree Strongly).

Response Options:
AS = Agree Strongly
MA = Moderately Agree
SA = Slightly Agree
U = Uncertain
SD = Slightly Disagree
MD = Moderately Disagree
DS = Disagree Strongly

Options							Item
AS	MA	SA	U	SD	MS	DS	1. I plan to stay in my position awhile.
AS	MA	SA	U	SD	MS	DS	2. I am quite sure I will leave my position in the foreseeable future.
AS	MA	SA	U	SD	MS	DS	3. Deciding to stay or leave my position is not a critical issue for me at this point in time.
AS	MA	SA	U	SD	MS	DS	4. I know whether or not I'll be leaving this agency within a short time.
AS	MA	SA	U	SD	MS	DS	5. If I got another job offer tomorrow, I would give it serious consideration.
AS	MA	SA	U	SD	MS	DS	6. I have no intentions of leaving my present position.
AS	MA	SA	U	SD	MS	DS	7. I've been in my position about as long as I want to.
AS	MA	SA	U	SD	MS	DS	8. I am certain I will be staying there awhile.
AS	MA	SA	U	SD	MS	DS	9. I don't have any specific idea how much longer I will stay.
AS	MA	SA	U	SD	MS	DS	10. I plan to hang on to this job awhile.
AS	MA	SA	U	SD	MS	DS	11. There are big doubts in my mind as to whether or not I will really stay in this agency.
AS	MA	SA	U	SD	MS	DS	12. I plan to leave this position shortly.

Appendix I: Recruitment Poster

Participate in Nursing Research

Informational Sessions to be held

For RN's from Shaffer 3 and Level 4

Date: April 1, 2008

Times:12:30- 1:00

1:00- 1:30

Location: Shaffer 3 staff lounge

About the Author

Mary Kohler was born and raised in New York. Mary received her Associate of Applied Science in Nursing from Salem College, Salem West Virginia. She received her BSN and Master's degrees in Nursing from Florida Atlantic University in Boca Raton, Florida. Her research interest is in the area of the Nursing work environment. In particular, "Exploring the Relationships among Work related Stress, Quality of Life, Job Satisfaction and Anticipated Turnover on Nursing Units with Clinical Nurse Leaders."

Mary Kohler is a member of the international nursing honor society; Sigma Theta Tau and a member of the Southern Nursing Research Society. She is a member of the Florida Organization of Nurse Executives as well as the Tampa Bay Organization of Nurse Executives. She has served a research mentor for FONE.

In March of 2010 she attended and was inducted into the Inaugural Student Health Policy Institute of the American Association of Colleges of Nurses.