Impact of Nurse Faculty Job Stress on Job Satisfaction
and Intent to Remain in Academia

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Abstract

In order to maintain sufficient nursing faculty to meet the challenges posed by the 2010 Institute of Medicine (IOM) report, schools of nursing must determine how to decrease faculty job stress, promote job satisfaction, and improve faculty retention. This dissertation’s primary aim is to examine the relationships between job stress, job satisfaction, and intent to remain in academia among nursing faculty with research focused doctoral degree (RFDD), who teach at baccalaureate level or higher. Its secondary aim is to identify predictors of these same phenomena. A tertiary aim is to test the applicability of the effort-reward imbalance (ERI) model to effectively explain the nature of the relationships between job stress, job satisfaction, and intent to remain in academia among RFDD prepared nursing faculty who participated in this study. Responses from 363 nursing faculty members who met the inclusion criteria for this study were analyzed. The questionnaire used included the following components: Effort-Reward Imbalance (ERI) which measured job stress, Job In General (JIG) which measured job satisfaction, Job Descriptive Index (JDI) which measured faculty satisfaction with coworkers, present job, pay, promotion and supervision, and a single question on intent to remain in academia (IRA). Forty-seven percent of faculty reported job stress, 92% \((n = 326)\) reported job satisfaction, and 81% \((n = 275)\) reported intent to remain in academia. Statistical analysis indicated that demographic factors, such as age, gender, and years as faculty, did not influence job stress, but level of formal education and number of hours worked on the job were influential factors of job stress. A logistic regression showed that job satisfaction was a significant predictor of intent to remain in academia. Job satisfaction also mediated the relationship between intent to remain in academia and job stress. This study indicates that although nursing faculty did report job stress, they also reported job satisfaction and intent to
remain in academia.

*Keywords: Job stress, Job satisfaction, Intent to remain in academia, Nursing Faculty, Effort - Reward Imbalance*
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CHAPTER 1: INTRODUCTION

Nurse faculty are continually involved in potential sources of conflict and struggle with the various roles of educator, grant writer, researcher, clinician, role model, and scholar, making the faculty role very complex and stressful. Job stress among nursing faculty has affected job satisfaction and intent to remain in academia. Several variables have been reported to contribute to nurse faculty job stress including increased workload and perceived low salaries. A number of studies conducted on nursing faculty have revealed that multiple faculty roles contribute to increased workload. The combination of higher workload that is not reciprocated with greater reward may result in job stress, which could influence faculty job satisfaction and intent to remain in academia. According to Siegrist (1996), an imbalance between high effort or workload and low reward on the job is particularly stressful for employees. The imbalance between effort and reward on the job could be associated with adverse physiological and psychological effects in the form of depression or job dissatisfaction, and may result in quitting one’s job (Kinman & Jones, 2008; Siegrist, Lunau, Wahrendorf, & Dragano, 2012). The aforementioned concerns may greatly influence the ongoing shortage of nursing faculty.

According to Ellis (2013), there is a well-documented shortage of nursing faculty, which further exacerbates workload demands. Increases in faculty workload result in difficulties with work-life balance and dissatisfaction, which could result in careers in nursing education becoming less attractive to young faculty (Ellis, 2013). In a study conducted by Fontenot, Hawkins & Weiss (2012) to investigate Nurse Practitioner (NP) faculty members,
participants detailed their experiences with cognitive dissonance, citing differences between expectations for which they were rewarded and those for which they were compensated. The authors concluded that expecting faculty members to excel in practice, research, teaching, and service may create unrealistic workloads for NP faculty members (Fontenot, Hawkins, & Weiss, 2012). Other studies have reported similar findings related to high nursing faculty workloads and resulting dissatisfaction with reward (Bittner & O'Connor, 2012; Leonard, Fulkerson, Rose, & Christy, 2008).

Nurse faculty reward in terms of salary and promotion opportunities have been examined by several authors and found to be unsatisfactory. Many studies have reported nurse faculty reward, including salaries, as inadequate (Carlson, 2009; Evans, 2013; Leonard et al., 2008). In addition to the increased workload reported by nurse faculty, rewards have been reported be less compared to faculty from other departments performing similar jobs. As a result, many nurse-educators moonlight, not only to maintain clinical expertise, but also to augment inadequate faculty salaries (Carlson, 2009; Evans, 2013).

In a study conducted on the impact of human capital and selected job rewards on faculty job satisfaction, results indicated that faculty were more likely to be satisfied with their work if they were satisfied with their salary, benefits and workload (Lyons & Akroyd, 2014). Satisfaction with workload and rewards therefore influences job satisfaction and intent to remain in academia. Most studies have found associations among job stress, job satisfaction, and intent to remain in academia. The major variables of this study are therefore job stress, which according to Siegrist (1996) is an effort-reward imbalance experienced on the job, job satisfaction, and intent to remain in academia. The imbalance experienced by nursing faculty
in terms of their effort and reward needs to be addressed by the leadership in nursing schools to alleviate unnecessary job stress.

Researchers have explored reasons why nursing faculty leave academia, but few have focused on factors that encourage them to stay. Using Herzberg's Motivation-Hygiene Theory, Berent and Anderko (2011) conducted a nationwide, online cross-sectional survey. The survey was completed by 1,171 tenured nurse faculty. Factor analysis revealed that the most significant factor influencing retention was professional satisfaction with faculty identity, including the ability to shape nursing practice. The authors concluded that academic leadership may benefit by considering these factors to promote nurse faculty retention (Berent & Anderko, 2011).

According to Bittner and O’Connor (2012), a great deal of attention has been focused on the professional and faculty nursing shortage while little or no attention has focused on barriers to job satisfaction. In a study conducted to determine barriers to job satisfaction as reported by nurse faculty, Bittner and O’Connor (2012) utilized a 32-item survey instrument to investigate nurse faculty perception of their workload, job satisfaction, and barriers to satisfaction. Responses from 226 nurse faculty supported findings regarding factors essential to job satisfaction, including work environment and workload. Implications for the study findings included the need for attention to the complexity of the academic work environment, specifically in nursing education (Bittner & O’Connor, 2012).

Other studies have found that several factors have an impact on nursing faculty job satisfaction. One study was a meta-analysis conducted by Gormley (2003) to investigate factors that influence job satisfaction among nurse faculty. Factors that most influenced
satisfaction of nurse faculty included professional autonomy, leader expectations and behavior, and role conflict and ambiguity. Gormley (2003) indicated that there was evidence in the literature to suggest job satisfaction could make a difference in keeping qualified workers on the job, however, little research has been conducted focusing specifically on nursing faculty.

Perceptions of job stress and job satisfaction have contributed to nurse faculty shortage. Evans (2013) conducted a descriptive study to explore nurse faculty’s perception of what they believed were effective strategies to increase the number of nurse faculty. The respondents said that they became nurse educators to work with students and to help shape the nursing profession. The study also revealed that compensation inequities threaten the future of the profession. The findings recommended further study in evaluating the effectiveness of recruitment and retention strategies by schools of nursing to alleviate the shortage of nursing faculty (Evans, 2013).

The present shortage of master’s and doctoral prepared nursing faculty to teach in nursing schools, and the resulting inability of schools of nursing to admit qualified students at the baccalaureate and graduate levels, can be attributed to faculty job stress which is complex and multidimensional. The complexity and multidimensionality of faculty stress makes it both an urgent and significant topic for investigation, specifically among nurse faculty with RFDD, who are charged with the education of nurses at all levels in academia. This next section discusses the background of the study, statement of the problem, purpose and aims of the study. Research questions, hypotheses, and definitions of the study are also discussed.
Background

Nursing leadership has been challenged to find innovative ways to address the current nursing faculty shortage. Review of the literature shows several key factors have contributed to this problem including job stress, job dissatisfaction, attrition of qualified faculty members, and lack of interest in academic roles by nurses who are clinicians (Carlson, 2009; Gerolamo & Roemer, 2011; Bozeman, 2011; Lambert, 1991; Rouse, 2006). Other factors include lack of autonomy (Gormley, 2003; Gormley & Kennerly, 2011; Shultz, Wang, & Olson, 2010), role ambiguity (Gormley & Kennerly, 2011; Ruel, 2009), and role conflict (Chang, 2006; Gormley & Kennerly, 2011; Kaufman, 2010; Ruel, 2009; Shultz, et al., 2010). Lack of qualified faculty, lack of support from colleagues, school leadership, and the retirement of large numbers of nursing faculty are all factors reported to contribute to the present nurse faculty shortage (Allen, 2008; Leonard, Fulkerson, Rose, & Christy, 2008; Rouse, 2006). The National League for Nursing (NLN, 2003) has argued that the difficulty in maintaining qualified and experienced nursing faculty is due to an increase in retirement age and faculty leaving for higher-paying positions (Carver, Candela, & Gutierrez, 2011). Within the nursing profession, nurses receive higher compensation in clinical and private-sector settings, thus luring current and potential nurse educators away from teaching (Siela, Twibell, & Keller, 2009). Therefore, there is a need to examine job stress in terms of effort-reward imbalance, job satisfaction and intent to remain in academia among current nurse faculty with RFDD.
**Statement of the Problem**

Few studies have focused on the reasons why some nurse faculty find job stress levels manageable, or how they derive satisfaction in academia. There are no current or recently documented studies that examine the influence of job stress on nursing faculty job satisfaction and intent to remain in academia. The few studies conducted on nurse faculty work life reveal inconsistent and sometimes contradictory findings. Staurovsky (1992) and Carbogim & Goncalves (2007), for example, deemed qualities like low satisfaction with present pay and excessive workload unimportant elements in overall satisfaction with work life. Gormley (2003) also found that salary, tenure, supervision, and control did not rank as important characteristics for career fulfillment for nursing faculty.

Due to the present nursing faculty shortage, it is important that creative ways be found to encourage the recruitment and retention of the next generation of nursing faculty members. This can be done by disseminating, and clearly communicating, positive reasons why the role of nursing faculty is worthwhile, fulfilling, gratifying, and rewarding, despite the negative stress factors associated with the role (Ruholl, 2004).

The overall aim of this study is to examine the relationships between job stress in the form of effort-reward imbalance, job satisfaction, and the intent to remain in academia among nursing faculty with research-focused doctoral degrees. A secondary aim is to identify predictors of these same phenomena. A tertiary aim is to test the applicability of the effort-reward imbalance (ERI) model to effectively explain the nature of the relationships among job stress, job satisfaction and intent to remain in academia among RFDD prepared nursing faculty teaching at the baccalaureate level or higher.
Purpose of the Study

The purpose of this cross sectional quantitative predictive research study is to examine the impact of job stress on job satisfaction and intent to remain in academia among nursing faculty with research focused doctoral degrees (RFDD). Specifically, the study determines how the perceptions of job stress influenced job satisfaction and intent to remain in academia for nursing faculty. Nurse faculty with research focused doctoral degrees make up less than one percent of the total nursing workforce, accounting for an estimated 4,295 nurses (Health Resources and Resources Administration, 2010; Nickitas & Feeg, 2011). This group is primarily responsible for teaching and research (American Association of Colleges on Nursing, 2003) and educating nurses at all educational levels in the United States (Brady, 2007; Rouse, 2006). Nurses with doctorate degrees are needed to educate future generations of nurses. These faculty members also are well equipped to conduct research, promote important changes and advance health care in the United States through research and teaching. To date, a major gap in the literature exists because there are no studies on nurse faculty members with research focused doctoral degrees (RFDD) that examined their job stress, job satisfaction, and intent to remain in academia.

Aims of the Study

The aims of the study are:

Aim 1: To examine the relationships between job stress, job satisfaction, and intent to remain in academia by nursing faculty with Research Focused Doctoral Degrees (RFDD) and who teach at baccalaureate level or higher.
Aim 2: To identify factors that influence job stress, job satisfaction, and intent to remain in academia among nursing faculty with RFDD and who teach at baccalaureate level or higher.

Aim 3: To test the applicability of the effort-reward imbalance (ERI) model to effectively explain the nature of the relationships between job stress, job satisfaction and intent to remain in academia among RFDD prepared nursing faculty teaching at the baccalaureate level or higher. Specifically, the study determines how the perception of job stress influenced job satisfaction and intent to remain in academia.

Research Questions and Hypotheses

The research questions for this study were designed to identify and to evaluate the direction of the relationships among the independent, dependent and mediating variables. The independent variable in this study is job stress and two dependent variables are job satisfaction and intent to remain in academia (IRA).

In the mediation analysis, the dependent variable is intent to remain in academia, the predictor variable is job stress, and the mediator variable is job satisfaction. The mediation analysis was conducted to examine the mediating role of job satisfaction in the relationship between intent to remain in academia and job stress.

The research questions and hypotheses were derived from the aims of the study and the effort-reward imbalance theoretical model. The following research questions and hypotheses guided this study.
RQ1. What is the relationship between job stress and job satisfaction among nursing faculty with RFDD who teach at the baccalaureate level or higher?

**H1o**: There is no relationship between job stress and job satisfaction.

**H1a**: There is a negative relationship between job stress and job satisfaction.

RQ2. What is the relationship between job stress and intent to remain in academia among nursing faculty with RFDD who teach at the baccalaureate level or higher?

**H2o**: There is no relationship between nursing faculty job stress and intent to remain in academia.

**H2a**: There is a negative relationship between nursing faculty job stress and intent to remain in academia.

RQ3. What is the relationship between job satisfaction and intent to remain in academia among nursing faculty with RFDD who teach at the baccalaureate level or higher?

**H3o**: There is no relationship between nursing faculty job satisfaction and intent to remain in academia.

**H3a**: There is a positive relationship between nursing faculty job satisfaction and intent to remain in academia.

RQ4. Does job stress influence job satisfaction among current nursing faculty with RFDD who teach at the baccalaureate level or higher?

**H4o**: There is no influence of nursing faculty job stress on job satisfaction.

**H4a**: There is a negative influence of nursing faculty job stress on job satisfaction.

RQ5. Does job stress influence intent to remain in academia among current nursing faculty with RFDD who teach at the baccalaureate level or higher?
**H5o**: There is no influence of nursing faculty job stress on intent to remain in academia.

**H5a**: There is a negative influence of nursing faculty job stress on intent to remain in academia.

**RQ6.** How does job satisfaction mediate the relationship between intent to remain in academia and job stress among nursing faculty with RFDD who teach at the baccalaureate level or higher?

**H6o**: Job satisfaction does not mediate the relationship between intent to remain in academia and job stress.

**H6a**: Job satisfaction mediates the relationship between intent to remain in academia and job stress.

**Significance of the Study**

Nursing school leaders need to recognize and acknowledge factors that influence job stress, job satisfaction and intent to remain in academia in order to help achieve both sufficient quality and quantity of expert faculty. In a recent study conducted in the United States, nursing faculty members’ workload was found to include classroom teaching, supervision of students in the clinical area, community service, scholarship and research, and concurrently, maintenance of clinical competency by individual faculty. These multiple responsibilities may lead to stress (Candela, Gutierrez, & Keating, 2013). In addition, multiple studies on nurse faculty pay have revealed that the level of compensation for amount of work accomplished is inadequate (Carlson, 2009; Fontenot et al., 2012; Gui, While, Chen, Barrriball, & Gu, 2011).
Carlson (2009) further argues that one of the major reasons for the current shortage of nursing faculty is pay; upon graduation, nursing students often earn more than the nurse faculty members who taught them. Nursing professors pursue expensive master's or doctoral degrees in order to become academic faculty members. The students taught by these faculty members need only a bachelor’s degree to earn more than their professors. As a result, the younger generation of nurses is not assuming academic roles, which could affect the faculty shortage.

The present faculty shortages, advancement freeze, and increasing number of students admitted to nursing programs may actually be increasing nurse faculty workload (Brady, 2010). Although nursing schools have seen increases in enrollment, the latest data still show that 68,936 qualified applicants to professional nursing programs were denied admission, including the denial of admission to more than 15,288 applicants to graduate schools (AACN, 2015).

Nurse faculty workload is a primary factor that has been shown to contribute to nursing faculty shortage. Several studies indicate that workload is one of the most stressful aspects of faculty careers (Berent & Anderko, 2011; Chang, 2006; Gerolamo & Roemer, 2011; Hinshaw, 2001; Jaramillo, Mulki, & Boles, 2011; Kaufman, 2010; Garbee & Killacky, 2008). Wilke & Gmelch (1988) found that major sources of faculty stress included having insufficient time to keep abreast of current developments in the discipline or field of study, and feeling continually overloaded with job demands that interfere with other personal activities. According to the NLN, (2010), 45 percent of nurse faculty stated that they were dissatisfied with their current workload. Of even greater concern, more than 25 percent of nurse educators who said they
were likely to leave their current job cited workload as a contributing factor (Chang, 2006; Kaufman, 2007; NLN, 2010).

In a study conducted by Bittner and O’Connor (2012) that examined nurse faculty barriers to job satisfaction, the majority of participants (71 percent) indicated that their workloads were higher than those of non-nurse faculty in their institutions. Sixty-five percent of the nurse faculty sample reported that their workloads were larger than they had expected before coming to their present jobs. Participants reported that external factors had a considerable impact on their workload. Fifty-eight percent of the participants thought the nursing shortage affected their workload (Bittner & O’Connor, 2012). A first step in developing solutions to the present nursing faculty shortage is to gain a clearer understanding of factors that predict job stress, job satisfaction, and intent to remain in academia among nursing faculty with RFDD. Knowledge of such factors could be used to plan strategies to reduce job stress.

Examples of factors that promote job satisfaction and intent to remain in academia include degree of work commitment and autonomy, recognition from supervisors and colleagues, fair pay, time for leisure, family and collegiality (Gerolamo & Roemer, 2011; Gui, Barriball, & While, 2009a, 2009b). According to Berent and Anderko (2011), the main reasons for faculty remaining in academia include enjoyment derived from mentoring others, the value of respect given to faculty members, the ability to shape future nursing practice, and the sense of community with other nurse faculty members. Carbogim and Goncalves (2007) found that nursing faculty members’ understanding of the meaning of being an educator included personal recognition, mission, and the exchange of experiences, and that
dissatisfaction at work was related mainly to the lack of material and human resources, excessive workload, low salaries, and the lack of privacy.

This study seeks to examine the effect of nurse faculty job stress on job satisfaction and intent to remain in academia (IRA) among nurse faculty members with research focused doctoral degrees (RFDD). In addition, the study will identify predictors of nurse faculty job stress, job satisfaction and intent to remain in academia. Based on the literature review, variables such as pay, workload, coworkers, demographic factors, and leadership support could affect job stress, job satisfaction and intent to remain in academia. Multiple regression analysis was conducted to examine factors that predict job stress, job satisfaction and intent to remain in academia. The next section will define the three variables in the study: job stress, job satisfaction and intent to remain in academia. In addition, five Job Descriptive Index (JDI) variables will be defined.

**Effort-Reward Imbalance (ERI) Theoretical Framework.**

Effort-reward imbalance theory seeks to explain the influence of excessive effort at work on low reward, which results in job stress. This theory suggests that high effort, low reward and high need for control lead to negative outcomes (Hanson, Godaert, Maas, & Meijman, 2001; Siegrist, 2005). This study seeks to examine nurse faculty job satisfaction and intent to remain in academia in light of job stress influenced by an effort-reward imbalance.

In the past few decades, job stress has received a lot of attention because psychosocial working conditions have been found to exert strong adverse risk factors on workers' health outcomes (Qi et al., 2014). Among a myriad of job stress theoretical models, the effort–reward imbalance model has provided awareness into the theory that a combination of high efforts
(e.g. high workload) and low rewards (e.g. salary, esteem, career opportunities, and security) can result in job stress (i.e. the imbalance between effort and reward) (Qi et al., 2014). The effort-reward imbalance (ERI) model was first proposed by Siegrist (1986) and later developed as a theoretical model. ERI is defined as an imbalance between the effort a person puts into one’s job and the rewards they receive from it (Siegrist, 1996).

From the sociological point of view (Siegrist, 1996), effort at work is spent as part of a socially organized exchange system to which employers generally contribute on the side of rewards. The principle of social reciprocity forms the basis of the employment contract, which defines obligations and tasks to be accomplished in exchange for fair rewards (Siegrist, 2005). Contractual reciprocity operates through norms of return expectancy, where effort spent by employees is reciprocated by equitable rewards from employers (Siegrist, 2010). The model of effort-reward imbalance is based on the assumption that efforts spent at work are not reciprocated by equitable rewards under specific conditions. Based on the principle of the norm of social reciprocity, an employee expects fair rewards in terms of money, esteem, and career opportunities (including job security) from the effort they put into work (Siegrist, 1996; Tsutsumi et al., 2009).

According to the model, the experience of a lack of reciprocity in terms of high costs and low gains provokes negative emotions in affected employees (Siegrist, 1996). Feelings of being unappreciated or being treated unfairly, coupled with inadequate rewards, results in ongoing strained reactions in the autonomic nervous system. This is because the recurrent experience of reward insufficiency in a core social role impairs successful self-regulation (Siegrist, 2000). Thus, in the long-run, the imbalance between high effort and low reward at
work increases illness susceptibility as a result of continued strained reactions (Johannes Siegrist et al., 2004).

**Effort at Work**

Effort at work is defined as the amount of work or workload expected from one’s work role. Effort implies frequency and stressfulness of work pressure, interruptions, changing demands at work, and problems faced on the job (Siegrist, 1996; Bittner & O’Connor, 2012). Bittner & O’Connor (2012), in their study on nurse faculty retention, found that 67% of respondents perceived that their workloads were higher than other faculty members in their institutions and that their workloads were larger than they had expected before becoming nursing faculty members. The even distribution of workload among employees would preserve their sense of fairness. In addition, the abatement of long hours of overtime work is a basic approach to workload reduction (Spurgeon, Harrington, & Cooper, 1997). This problem also can be approached from the perspective of the ERI model for the reason that frequent overtime work, particularly if it is unpaid, damages the employees’ perception of job reward (Tsutsumi & Kawakami, 2004). Whereas the term “overtime” is not used in academia, it is similar to overload work in academia.

According to Siegrist (1996), employees expect a fair reward from the effort they put into their work and that reward is generally distributed in three ways: money, esteem, and career opportunities, including job security. If employees believe their effort exceeds expected reward, or if they are overworked and underpaid, this could result in job stress. The job stress could then manifest as physiological and psychological symptoms (van Vegchel, de Jonge, Bosma, & Schaufeli, 2005; Zurlo, Pes, & Siegrist, 2010).
Reward

According to Siegrist (1996), employees expect a fair reward from the effort they put into work and that these rewards are generally distributed in three ways: money in the form of salary and other benefits, esteem, job promotion and career opportunities, including job security. Nursing faculty pay is reported to be lower than faculty pay in other disciplines within the same institution (Evans, 2013; Siela, Twibell, & Keller, 2009). Evans (2013) concluded that the disparity in the compensation of nurse faculty and nurse practitioners will continue to draw qualified nurses away from nursing education careers (Evans, 2013).

Overcommitment

The term overcommitment is defined as a set of attitudes, behaviors and emotions that reflect a person’s excessive striving for approval and appreciation. The model proposes that people who overcommit to their jobs exaggerate their efforts beyond levels usually considered appropriate, or they expose themselves to high demands at work too often. Consequently, these efforts diminish their potential to recover from job demands and increase their susceptibility to frustration when the expected rewards are not forthcoming, eventually leading to poor health (Siegrist, 1996).

Definition of Key Terms

The key terms used throughout this study are defined below. The main variables in this study are job stress, which is measured by effort-reward imbalance, job satisfaction, and intent to remain in academia.
**Job stress.** Job stress is defined as the imbalance between effort at work and reward (Siegrist, 1996). Job stress will be measured using the effort-reward imbalance (ERI) instrument, which is based on the ERI theoretical framework (Siegrist, 1996).

**Job satisfaction.** The definition of job satisfaction employed by this study was provided by P. C. Smith et al. (1969), who defined job satisfaction as “the feelings a worker has about his job” (p. 100). Therefore job satisfaction is a decision about how one feels about their job, be it positive, negative or neutral. Job satisfaction is measured by the Job in General (JIG) instrument.

**Present work.** This is defined as an employee’s satisfaction with the work itself. This facet of JDI is designed to measure employees’ satisfaction derived from the current job.

**Supervision.** This facet of JDI is designed to measure employees' satisfaction with supervision provided on the current job.

**Coworkers.** This area looks at satisfaction with collegiality on the job. This facet of JDI is designed to measure employees’ satisfaction with their interaction with coworkers.

**Pay.** This is defined as compensation received from the job. This facet of JDI is designed to measure employees’ satisfaction with their pay.

**Promotion.** Examines satisfaction from work advancement achieved on the job. This facet of JDI is designed to measure employees’ satisfaction with opportunities with promotion.

**Intent to Remain in Academia (IRA).** Intent to remain in academia is conceptually defined as a nurse faculty member’s declaration of his/her intent to stay in an academic role for the next five years. IRA will be measured using the single item research developed question, “Do you plan to stay in academia for the next five years?”
Summary

Chapter one presented the significance of the problem. This chapter has offered a broad understanding of the issues that surround faculty job stress and how that affects job satisfaction and intent to remain in academia. The research will add to the scholarly literature concerning nurse faculty job stress, job satisfaction and intent to remain in academia as perceived by those who teach at the baccalaureate level and higher. It will contribute to the knowledge base concerning the ways job stress affects the work experience of nursing faculty. This study is innovative for three reasons. First, the study focuses on the two most cited factors—workload and pay—as contributors to nursing faculty job stress. Examining work and pay as job stress factors within a framework of effort-reward imbalance is an approach not yet taken by any one study. Secondly, the study employs the most appropriate theoretical framework to explain how an imbalance between effort at work and rewards received results in job stress. Theory-based interventions using this framework could bring about changes in nursing faculty workload in the near future. Finally, this is the first time the effort-reward imbalance theoretical framework has been applied to a study of nursing faculty job stress in the United States. Chapter two is a discussion of literature related to job stress, effort-reward imbalance, job satisfaction and intent to remain in academia.
CHAPTER 2: LITERATURE REVIEW

The following review of the literature provides an overview of the research conducted on nurse faculty workload, reward, job satisfaction and intent to remain in academia. Concepts and ideas related to job stress, effort, reward, job satisfaction and intent to remain in academia were researched and synthesized as background for this study. The present literature review revealed that, although several dynamic factors such as workload and reward have an impact on nursing faculty job satisfaction and intent to remain in academia, a major gap existed because there are no documented studies that focus on job stress using ERI in nursing faculty with RFDD. Because there are no studies related to nurse faculty job stress using the precise parameters of the forthcoming study, a review of ancillary literature was conducted.

To gain an understanding of the major study variables, the literature review centers on topics related to job stress, workload, reward, job satisfaction and intent to remain in academia. This review begins with the definition of stress, an overview of the job stress models (in particular the ERI model), job satisfaction, and intent to remain in academia.

A review of the existing literature reveals a myriad of theoretical and conceptual frameworks have been employed to investigate nursing faculty job stress. Examples include the fit (P-E fit) model (Goštautaitė & Bučiūnienė, 2010), Role Strain Theory (Whalen, 2008), the multidimensional model of Organizational Commitment (Carver et al., 2011; Garbee & Killacky, 2008; Gormley & Kennerly, 2011), the Path Model (Al-Omari, Qablan, & Khasawneh, 2008) and the Job-Demand-Control-Support Model (Gallagher, 2005). These theoretical frameworks and survey instruments have also examined numerous variables that
affect job stress, job satisfaction, and intent to remain in academia. Although the study findings focused primarily on coping strategies for assisting nursing faculty, neither the stress facing nursing faculty nor the overall problem of the nursing faculty shortage has been affected.

Interestingly, RFDD faculty comprise less than one percent of the total nursing workforce with a total of 4,295 faculty holding RFDD (HRSA, 2010). As suggested above, these full-time nurse faculty members have primary responsibilities of teaching and research (AACN, 2003), while also being charged with educating nurses at all educational levels in the United States (Brady, 2007; Rouse, 2006). According to Hinshaw (2001), the scientific knowledge base required to guide nursing practice is only beginning to be available through the research programs of nursing faculty. This knowledge base could, however, decrease if the growing nursing faculty shortage is allowed to continue without concerted efforts from members of the nursing discipline to stem this problem (Hinshaw, 2001; Rouse, 2006). In addition, the study of nurse faculty job satisfaction has attracted limited research interest despite the significance of the role of nursing faculty in the education of future nurses, and the conduction of research to inform evidence-based clinical practice (Gui, Barriball, & While, 2009b).

As the number of nursing faculty remains stagnant or decreases, the remaining nursing faculty will be asked to assume more responsibility and further increase their stress, leading to decreased satisfaction and less intent to remain in academia. The American Association of Colleges of Nursing (2015) reveals that enrollment in baccalaureate, master’s, and doctoral nursing programs increased in the 2014 academic year. Despite the lack of adequate faculty
and resources, nursing schools were able to increase student capacity. This means that more faculty are expected to work with increasing class sizes without any corresponding increases in salary and resources, potentially deepening perceived job stress and job dissatisfaction.

Other studies have focused on the negative factors associated with academic nursing careers. Some barriers to finding qualified faculty include, but are not limited to, geographic location and climate (17%), low salary levels compared to nurses working in clinical areas (45%), excessive workload with too many hours used for class preparation and student advisement (Moulton & Wakefield, 2007). Additionally, an expectation to conduct research (12%), and the lack of opportunities for advanced degree courses required for faculty positions (27%) are included on the list of factors that impede nurses from entering academia (Moulton & Wakefield, 2007).

The chronic nursing faculty shortage has been attributed to stressors like workload and inadequate reward (Bartfay & Howse, 2007; Kaufman, 2007; Leonard, Fulkerson, Rose, & Christy, 2008). Despite ten years of work by federal, state, and local governments to find solutions to the problem, the nursing faculty shortage persists (Kaufman, 2010). The greatest impact of the nursing faculty shortage is the indirect negative effect on quality patient care (Allen, 2008; Gerolamo & Roemer, 2011). According to Shipman and Hooten (2008), nursing faculty shortage has resulted in a shortage of bedside nurses. Nurses who work through this shortage are frequently mandated to work overtime. Working overtime could lead to exhaustion, sleep deprivation and job dissatisfaction. In addition, an exhausted nurse could cause medication errors, decreasing patient safety (Shipman & Hooten, 2008). Research findings based on state and hospital administrative data have established an association
between inadequate hospital nurse staffing and increased risk of adverse patient outcomes, including mortality (Buerhaus et al., 2007).

The continued faculty shortage could be attributed to the unwillingness of nursing schools to acknowledge job stress among nurse faculty and find strategies to alleviate that job stress. According to Siegrist (2005), such strategies should focus on the division of work in terms of quantity and quality, work schedules and their flexibility. Other strategies include the improvement of monetary rewards, promotion opportunities including investment in retraining on the job, and, most importantly, enhanced job security (Siegrist, 2005). How can an increased recognition of job stress improve how colleges respond to the trend of nursing faculty shortage? Guglielmi & Tatrow (1998) suggest that the area of faculty stress research is ready for a fundamental shift to theory-based investigations designed to test causal models of teacher job stress with psychometrically sound instruments (Guglielmi & Tatrow, 1998). The authors argue that several interventions to alleviate job stress are being emphasized despite the flaws in methodology and flaws in theoretical basis for faculty jobs stress studies (Guglielmi & Tatrow, 1998). According to Tsutsumi and Kawakami (2004), theory-based intervention depends largely on organizational changes that are beyond the individual employees' ability, as the cooperation of employers is necessary. As a result, universities and colleges that employ nurse faculty should examine the effect of job stress on job satisfaction and IRA. Having a better understanding of theory-based interventions by colleges using the ERI model could create a balance between effort and reward, either by decreasing faculty workload, increasing reward, or both, as deemed necessary. The key to stemming the nursing faculty shortage is to
not only find creative ways to recruit new faculty but to implement new strategies to retain those already in the faculty role.

**Definition of Stress**

Several definitions of stress are found in the literature and include those given by Cannon (1932), Selye (1976), and Lazarus and Folkman (1984). Stress is an inherent factor in any type of vocation or career (Guglielmi & Tatrow, 1998). At its best, the presence of stress can be a motivator that urges the individual to strive for excellence. However, excess amounts of stress can lead to a lack of productivity, a loss of confidence, and the inability to perform routine tasks (Kyriacou, 2001). The use of the term stress in the literature is not clear; sometimes it is an agent that acts on the human organism, and other times it is used to indicate a response to external or internal stimuli (Lazarus & Folkman, 1984). Some researchers have used the term stress to refer to the level of pressure and demands made on an individual and have used the term ‘strain’ to refer to the reaction to such stress (Caplan, Cobb, French, Harrison & Pinneau, 1975; Karasek, 1979). Other researchers have used the term stress in terms of the degree of mismatch between demands made upon an individual and the individual’s ability to cope with those demands (Frankenhaeuser, 1991; Kyriacou, 2001). According to Lazarus & Folkman (1984), while stress is an inevitable aspect of the human condition, it is coping that helps the individual to adapt and results in a positive outcome (Lazarus & Folkman, 1984). Job stress theories have grown and evolved over the years and the term “stress” has been defined variously. A historical review of the development of job stress theories will be discussed in the next section.
Stress Theories

Theories that focus on the specific relationship between external demands (stressors) and bodily processes (stress or strain) can be grouped in two different categories: systemic stress based in physiology and psychobiology (Selye, 1976) and psychological stress developed within the field of cognitive psychology (Lazarus, 1966, 1991; Lazarus & Folkman, 1984). Psychological stress theory utilizes two central concepts to illuminate stress—appraisal and coping. Appraisal is the individual’s evaluation of the importance of what is happening for their well-being and coping involves the individual’s efforts in thought and action to manage specific demands (Lazarus, 1993). Since its first presentation as a concept by Lazarus (1966), this theory has undergone several important revisions. In the latest version, Lazarus (1991) views stress as a relational concept, a transaction between individuals and their environment. Many investigators have developed theoretical models to explain related concepts of job stress. Several of these theoretical models are described below.

Theoretical Models of Job Stress

Studies conducted over a number of decades have produced a growing body of evidence that job stress adversely affects the productivity, performance, job satisfaction and health of professionals (Fontenot et al., 2012; Gmelch, Lovrich, & Wilke, 1984; Siegrist et al., 2012). Moreover, it has been reported that faculty stress inevitably affects the learning environment and interferes with the achievement of educational goals as they lead to faculty’s detachment, alienation, cynicism, apathy, and absenteeism, and ultimately the decision to leave academia (Chang, 2006; Guglielmi & Tatrow, 1998; Kyriacou, 2001). The literature search reveals that stress has an impact on faculty job satisfaction and intent to remain in
academia (Al-Omari, Qablan, & Khasawneh, 2008; Guglielmi & Tatrow, 1998; Kyriacou, 2001).

The role of the faculty member in today’s academic environment is considered to be very stressful, both physically and psychologically (Holland, 1992; Whalen, 2009a). University norms expect excellent teaching, scholarship, service, and ability of nursing faculty to use technology in the classroom and in the clinical area. In addition, a nurse faculty member is expected to demonstrate clinical excellence and serve as a role model for peers and students (Bartfay & Howse, 2007; Holland, 1992). All these expectations and requirements result in faculty stress. Some of the organizational characteristics that have been associated with nurse faculty stress are time constraints, workload, job demands, role conflict, role ambiguity, income, resources, class size, administrative bureaucracy, autonomy/participation in decision making, collegiality, student discipline and interaction, reward and recognition, and career advancement (Bartfay & Howse, 2007; Gormley & Kennerly, 2011; Whalen, 2009b). Following are some of the prominent theoretical models accounting for job stress.

**Person-environment fit model.** The person-environment fit model was developed in the mid-1970s at the University of Michigan (Caplan, Cobb, French, Harrison, & Pinneau, 1975; Harrison, 1978). The model is based on the suggestion that strain is the result of a mismatch between the requirements and demands of the job and the person's real or perceived ability to meet those demands. Individual differences in perceptions, skills, tolerance for job pressure, and vulnerability to dysfunctional outcomes are the key modifiers of the stress-strain relationship. This model suggests that the target for change is the individual, not the environment. Interestingly, the person-environment fit model has been very popular in the
United States, where management exerts strong control over the production process, and productivity is the highest priority (Guglielmi & Tatrow, 1998).

**Demand-control model.** The demand-control job stress model, also frequently referred to as the job strain model, was developed by Scandinavian researchers in the late 1970s (Karasek, 1979; Karasek, Baker, Marxer, Ahlbom, & Theorell, 1981; Karasek & Theorell, 1990). In this model, the two factors that determine job strain are demands—for example, workload and deadlines—and decision latitude, emphasizing qualities of autonomy and control. The combination of these two factors allows specific predictions about which work conditions will result in strain. The lowest amount of strain should be expected in jobs characterized by low demands and high decision latitude, whereas the greatest strain will result from the combination of high demands and low decision latitude (Guglielmi & Tatrow, 1998).

The demand-control model has stimulated the greatest amount of research and is generally acknowledged as the dominant theoretical perspective in the job stress area. As noted earlier, this model allows specific predictions about which particular aspects of the work environment result in strain and which occupations are most vulnerable. A large number of empirical tests of these predictions have been conducted and have demonstrated a high predictive power for the model. In this case, reducing job stress would require workplace reorganization aimed at lowering job demands and increasing control and fairness (Guglielmi & Tatrow, 1998).

**Effort-distress model.** The effort-distress model was first developed in Scandinavia, a contribution related to the demand-control model (Frankenhaeuser, 1981, 1991). According to
this model, the great deal of effort required by jobs that place high demands on the individual does not inevitably result in strain; rather, strain is the distress experienced when the job demands are not mitigated by personal control and decision latitude. Frankenhaeuser and her colleague (Lundberg & Frankenhaeuser, 1980) found that the presence or absence of distress yields different patterns of neurohumoral responses. Effort without distress leads to increased production of catecholamine, whereas effort with distress results in hypersecretion of cortisol by the adrenal cortex (Ganster & Perrewé, 2011).

**Effort-reward imbalance model.** In the effort-reward model proposed by Siegrist and colleagues (Siegrist, 1996; Siegrist, Peter, Junge, Cremer, & Seidel, 1990), effort refers both to demanding objective working conditions (e.g., workload, deadlines) and to intrinsic attempts to cope and establish control. Reward, on the other hand, refers to job benefits, promotion prospects, and job security, as well as decision latitude and control. According to this model, when the amount of effort required and expended exceeds the job rewards attained, the individual experiences stress and may suffer health problems. This model could be considered an expanded version of the demand-control model in that decision latitude is one of the many possible job rewards. Unlike the demand-control model, the theory-based intervention using this model depends largely on organizational changes that are beyond the individual employees' ability, requiring the cooperation of employers (Ganster & Perrewé, 2011; Guglielmi & Tatrow, 1998; Akizumi Tsutsumi & Norito Kawakami, 2004).

As can be seen from the description of the various job stress models, it appears each theory selects a piece of the problem associated with job stress. There is no one theory that explains all the complexities of job stress therefore there is a need for a singular job stress
theory that is all inclusive, rather than continue to use a combination of theories that can cover all the complexities of job stress.

For the aforementioned reasons, this study utilizes the Effort Reward Imbalance (ERI) model to explain how imbalance between high effort at work and low rewards results in nurse faculty job stress. The key assumption of the ERI model is that the imbalance between effort and reward produces job stress and subsequently, poor health, which could be physiological, psychological or both (Bellingrath, Rohleder, & Kudielka, 2010; Ganster & Perrewé, 2011; Siegrist, 2010). The model predicts that the perception of fair rewards will promote employee satisfaction, whereas a lack of reciprocity and balance between effort and reward will lead to a sustained stress response and dissatisfaction (Siegrist, 2001; Kinman & Jones, 2008).

In addition, strategies employed to resolve the shortage have not emphasized the importance of balancing workload and salaries, which is the basis of the Effort-Reward Imbalance model. Theory-based strategies utilizing the ERI model could be employed by nursing schools to help decrease this shortage because the issue of workload and salaries will be at the forefront of the discussion (Bartfay & Howse, 2007; Tsutsumi & Kwakami, 2004). Further, knowledge gained from an examination of factors that decrease job stress and promote nurse faculty job satisfaction and intent to remain in academia could be used to help recruit and retain qualified nurses into academia.

Several factors appear to influence faculty effort-reward imbalance. Based on the ERI model of job stress, a review of the existing literature was conducted on workload and reward. The review of literature did not produce studies on nurse faculty effort-reward imbalance on the job and its impact on job satisfaction and intent to remain in academia. Despite this
absence, the literature did yield pertinent studies on nurse faculty job stress, job satisfaction and intent to remain in academia in general. The next section is a discussion of these sources.

The effort-reward imbalance (ERI) concept was first proposed by Siegrist (1996) and defined as an imbalance between the effort a person puts into their job and the rewards they receive from it. This concept was later developed into the effort-reward imbalance model by Siegrist (1996) and is widely employed in more recent job stress studies among physicians (Buddeberg-Fischer, Klaghofer, Stamm, Siegrist, & Buddeberg, 2008; Calnan, Wainwright, & Almond, 2000; Enberg, Sundelin, & Öhman, 2013), healthcare workers including nurses (Derycke et al., 2010; Herin et al., 2011), and teachers (Bellingrath & Kudielka, 2008; Kinman & Jones, 2008; Loerbroks et al., 2014). Few teacher/faculty studies use the ERI theoretical model to examine job stress among educators, and no study was found directly related to nursing faculty job stress.

The ERI model is built on the principle of social exchange, a fundamental principle of all social transactions that are characterized by some form of service. According to Siegrist (2010), reciprocity forms the core of the work contract, defining specific obligations and job responsibilities to be performed in exchange for adequate rewards. Effort on the job includes heavy workload and job demands. Rewards include money, esteem, and career opportunities including promotion and job security. The ERI model predicts that the perception of fair rewards will promote health and satisfaction in employees, whereas a lack of harmony between efforts and rewards will lead to job stress (Siegrist, 2001; Siegrist, 2010).

Siegrist (2005) reviewed 11 prospective epidemiological studies conducted in European countries that examined ERI at work and health outcomes. The findings revealed
that employees who experienced failed reciprocity at work were twice as likely to experience cardiovascular disease, depression, or alcohol dependence compared to those who were not exposed. These associations were found to be stronger for men than for women. However, in the review, less than one percent of the population studied was comprised of women.

In summary, the ERI model posits that a lack of reciprocity or fairness between costs and gains (i.e., high cost–low gain conditions) leads to emotional distress, resulting in adverse health outcomes (Tsutsumi & Kawakami, 2004). According to Kinman & Jones (2008), most studies have tested the ERI model as a predictor of employee health status and few have tested its performance in predicting outcomes such as job satisfaction and employee intent to remain on the job. Few studies have associated job stress with leaving intentions. To date, the ERI theoretical model has not been utilized to test outcomes of job satisfaction and intent to remain in academia among nurse faculty with research focused doctoral degrees. The following section provides a working definition for the terms effort, reward, job satisfaction and intent to remain in academia.

**Effort at Work**

Siegrist (1996) implied that effort at work involves heavy workload and demands on the job which, when combined with perceived inadequate reward, results in job stress. However, as stated earlier, there were no studies found utilizing the effort-reward imbalance model to examine nurse faculty effort and workload concerns. However, a review of the literature revealed there are many studies addressing nurse faculty workload concerns (Bittner & O’Connor, 2012; Fontenot et al., 2012; Gerolamo & Roemer, 2011) This review was based on findings relevant to nurse faculty effort/workload on the job. A review of the literature
indicates workload as one of the most-often mentioned contributors to faculty stress, and in turn faculty job dissatisfaction and intent to quit academia (Bartfay & Howse, 2007; Kaufman, 2007a; Leonard, Fulkerson, Rose, & Christy, 2008).

Nursing faculty workload has been cited as contributing to the nurse faculty shortage. Several studies indicate that workload is one of the most stressful aspects of faculty careers (Berent & Anderko, 2011; Chang, 2006; Garbee & Killacky, 2008; Gerolamo & Roemer, 2011; Hinshaw, 2001; Jaramillo, Mulki, & Boles, 2011; Kaufman, 2010). Wilke & Gmelch (1988) found that major sources of faculty stress included having insufficient time to keep abreast of current developments in the discipline or field of study, and feeling continually overloaded with job demands that interfere with other personal activities. The NLN (2010) revealed that 45 percent of nurse faculty stated that they were dissatisfied with their current workload. Of even greater concern, more than 25 percent of nurse educators who said they were likely to leave their current job cited workload as a contributing factor (Chang, 2006; Kaufman, 2007; NLN, 2010).

Several studies have indicated that workload is one of the most stressful aspects of the faculty career (Berent & Anderko, 2011; Garbee & Killacky, 2008; Gerolamo & Roemer, 2011; Hinshaw, 2001; Jaramillo, Mulki, & Boles, 2011; Kaufman, 2010; Thorsen, 1996; Whalen, 2008; Whalen, 2009a; Whalen 2009b; Williamson, Cook, Salmeron, & Burton, 2010). Gmelch, Lovrich, and Wilke (1984) investigated stress among higher education faculty and found that most of their concerns were related to constraints in time and resources. Wilke and Gmelch (1988) found that one major source of faculty stress was the feeling of being continually overloaded with job demands that interfered with personal activities. Thorsen
(1996) concluded, similarly, that it was primarily the quantity rather than the nature of academic work that was stressful. According to Allan and Aldebron (2008), faculty shortages have resulted in heavy workloads, leading many faculty members to work more than 60 hours a week. Similar findings were reported by Fontenot, Hawkins, and Weiss (2012), Goldenberg and Waddell (1990), and by Kaufman (2007b). While faculty members feel overloaded with work, a review of the literature reveals that they feel under-rewarded for the amount of effort they put into their work.

**Reward**

According to Siegrist (1996), inadequate rewards could result in an unbalanced effort-reward imbalance in an employee who believed they contributed more to their work than the reward they gained from it. One of the primary reasons for the present nurse faculty shortage is pay (Carlson, 2009). Upon graduation, nursing students often earn more than the nurse faculty members who taught them. Nursing professors pursue expensive master's or doctoral degrees to become academic faculty members. The students taught by these faculty members need only a bachelor’s degree to earn more than their professors (Carlson, 2009). Hinshaw (2001) stated that the scientific knowledge base of the nursing discipline required to guide practice is only beginning to be available through nursing faculty research programs. Nickitas & Feeg (2011) suggested that to accomplish this, there must be competitive salary and benefit packages available for highly qualified academic and clinical nurse faculty to be recruited and retained. Salary is therefore a deterrent to some qualified nurse clinicians who may want to teach. Many nurse faculty members have expressed that inadequate salaries deeply affect their job satisfaction and intent to remain in academia (Disch, Edwardson, & Adwan, 2004; NLN,
Rewards, in the form of salaries, benefits, job security, and esteem, affect faculty members’ job stress and job satisfaction (AACN, 2003; Evans, 2013; Kaufman, 2007a; Nadeem et al., 2011; Trossman, 2009; Williamson et al., 2010).

Terpestra (2003) conducted a study to assess faculty’s perception of fairness of faculty pay equity in the US. According to the author, there are four types of equity when it comes to employee pay system: internal, external, individual and procedural. Internal equity refers to the fairness of pay for different types of jobs within an institution. External equity on the other hand speaks to the fairness of the pay one receives when compared to organizations with similar jobs. Individual equity refers to the fairness of pay based on the relative performance contributions of individuals working on the same type of job in the same organization; and lastly, procedural equity simply refers to the perceived fairness of the processes and procedures used for pay raises in institutions. The findings of the web-based survey revealed that procedural equity was the most important determinant of faculty pay satisfaction, followed by individual, external and internal equities (Terpstra & Honoree, 2003).

Salary and benefits are therefore strong motivators for young professionals seeking employment (Fontenot et al., 2012). Conversely, Folkman & Lazarus (1990) concluded that faculty members, like other types of workers, tended to be satisfied if they felt that their pay reflected their market value.

**Job Satisfaction**

Smith, Kendall, and Hulin (1969) defined job satisfaction as “the feelings a worker has about his job” (p. 100). Grün, Hauser, and Rhein (2010) reported that job satisfaction rates among current and future nursing faculty must be of paramount importance to administrators
attempting to alleviate the decline in faculty numbers. According to Gui, Barriball, and While (2009a), whereas job satisfaction among nurses is a matter of concern worldwide, job satisfaction among nursing faculty members has received less attention.

Theory of Job Satisfaction

In a paper written by Locke (1969) entitled “What is job satisfaction?” Locke describes job satisfaction as the pleasurable emotional state resulting from the appraisal of one's job as achieving or fulfilling one's job values. He explains that job dissatisfaction is the “unpleasurable” emotional state resulting from the appraisal of one's job as frustrating or blocking the attainment of one's values (Locke, 1969). Various definitions have been given in literature for job satisfaction. Nevertheless, there appears to be a general agreement that job satisfaction is an affective (emotional) reaction to a job that results from the incumbent's comparison of the actual outcomes with those that are desired (expected and deserved) (Cranny, Smith and Stone 1992). Job satisfaction is a positive feeling an individual has towards his or her job (Daft, 2003). An employee who is satisfied feels fulfilled doing his job. Job satisfaction is an inherent feeling that one's talents are being fully utilized and that one's contribution is impacting society, while at the same time, personal growth needs are being met. Job satisfaction has also been associated with a personal feeling of achievement, either quantitatively or qualitatively. Mullins (2005) further states that concept of job satisfaction is regarded as complex and multifaceted.

Factors that influence job satisfaction in nurse faculty include workload, the ability to shape future nursing practices (Al-Omari, Qablan, & Khasawneh, 2008; Bittner & O’Connor, 2012; Crane-Roberts, 1998; Fontenot et al., 2012; Staurovsky, 1992), degree of work
commitment, recognition from supervisors and colleagues, fair pay, and collegiality (Gerolamo & Roemer, 2011; Gui, Barriball, & While, 2009a, 2009b). Traits of coworkers, promotional opportunities, support, and leadership were also reported to affect job satisfaction (Cash, Doyle, von Tettenborn, Daines, & Faria, 2011; Falk, 2007; Gormley, 2003). Faculty were more likely to be satisfied with their work if they were satisfied with their salaries, benefits, and workloads, with the support they received from their institutions, and with the way they perceived the institution as treating females and minorities (Lyons & Akroyd, 2014).

Al-Hussami, Saleh, Abdalkader & Mahadeen (2011) conducted a study to determine whether relationships existed among organizational commitment and job satisfaction, perceived organizational support, job autonomy, workload and pay. Stepwise linear regression analysis was used to estimate the probability that recorded variables included significant sample characteristics, such as age, experience, and other work related attributes. The outcome indicated that the predictive model consisting of three predictors—job satisfaction, perceived support and age—was significantly related to faculty members' commitment. Although the findings were positively related to organizational commitment, faculty members who remained committed stayed in academia, as the cost of leaving was high. These findings could assist academic leadership in monitoring factors that may increase or decrease job satisfaction among faculty (Al-Hussami, Saleh, Abdalkader, & Mahadeen, 2011).

Nurse faculty’s perception of factors that promote job satisfaction include degree of work commitment and autonomy, recognition from supervisors and colleagues, fair pay, time for leisure and family, and collegiality (Gerolamo & Roemer, 2011; Gui, Barriball, & While, 2009a, 2009b). According to Berent & Anderko (2011), the main reasons for faculty
remaining in academia include enjoyment with the opportunity to mentor others, the value of respect given to a faculty member, the ability to shape future nursing practices, and the sense of community with other nurse faculty members. Carbogim & Goncalves (2007) found that nurse faculty members’ understanding of the meaning of being an educator included personal recognition, mission, and the exchange of experiences, and that dissatisfaction at work was primarily related to the lack of material and human resources, excessive workload, low salaries, and the lack of privacy. Job satisfaction is subjective and complex. Undue stress associated with the nurse faculty role has been widely researched and associated with job dissatisfaction. Dissatisfaction of the nurse faculty role has also been linked to intent to quit academic work. All efforts should be made to decrease stress, improve job satisfaction, and promote IRA among this professional group.

**Intent to remain in academia**

The current nursing faculty shortage makes it important to understand faculty members’ intentions to remain in academia in order to develop strategies for slowing their departure. Moody (1996) suggests that the retention of highly qualified faculty affects the reputation of a nursing school, its faculty members’ own commitment to the institution, and the learning environment it provides for students. Knowledge concerning the organizational commitment of nursing faculty members, and about their satisfaction with the job of educating future nurses, is important to any plan to recruit and retain nursing faculty (Gormley & Kennerly, 2010). A review of the literature suggests several influences on nursing faculty members’ intent to remain in the job. These include rewards (Evans, 2013; Roughton, 2013),
compensations, benefits, workloads (Fontenot, Hawkins, & Weiss, 2012; Roughton, 2013), administrative support, collegiality, and collegial support (Tourangeau et al., 2012).

Bittner and O’Connor (2012) conducted a study to determine barriers to nurse faculty job satisfaction and reasons for leaving academia. The study elicited faculty perceptions about workload, job satisfaction, and respondents’ perceived barriers to job satisfaction. Data analysis revealed factors essential to job satisfaction, including work environment and workload. Faculty who intended to leave academia typically cited retirement, low compensation, and lack of flexibility in work-life balance as their reasons for leaving. Numerous nursing faculty members have indicated that inadequate salaries had affected their decision on whether to stay or quit academia (Disch, Edwardson, & Adwan, 2004; Fontenot et al., 2012; Kaufman, 2010).

Summary

To summarize, job stress, effort-reward imbalance, job satisfaction and intent to remain in academia are important factors to consider when examining the present nurse faculty work life. The review also suggests that job stress, effort-reward imbalance, job satisfaction and intent to remain in academia are related. Several factors contribute to nursing faculty job stress. These include excessive workload and compensation not commensurate with perceived amount of workload.

In addition, several studies have found correlations between job stress, job satisfaction and intent to remain in academia. Job stress can have a negative impact on job satisfaction and may result in faculty quitting academia. In light of the nursing faculty shortage faced by many colleges in the United States, it is vital that universities and schools of nursing recognize and
acknowledge factors that decrease the effort-reward imbalance, which in turn promotes job satisfaction and intent to remain in academia. A first step in developing solutions to the present nurse faculty shortage is identifying positive factors that promote faculty members’ effort-reward balance, job satisfaction and intent to remain in academia.

The next section discusses the methodology of the study including specific aims, research questions and hypotheses, subjects, and a description of instruments used for the study. The method chosen helps provide answers to the research questions and facilitates the testing of hypotheses.
CHAPTER 3: RESEARCH METHOD

The purpose of this cross sectional quantitative research study was to examine the impact of job stress on job satisfaction and intent to remain in academia among nurse faculty with research focused doctoral degrees (RFDD). A test of the effort-reward imbalance theoretical model developed by Siegrist (1996) was conducted. Specifically, the study determined how job stress as an imbalance between nurse faculty effort at work and reward influenced their job satisfaction and intent to remain in academia.

Aims of the Research

Aim 1: To examine the relationships between job stress, job satisfaction, and intent to remain in academia by nursing faculty with Research Focused Doctoral Degrees (RFDD) and who teach at baccalaureate level or higher.

Aim 2: To identify factors that influence job stress, job satisfaction, and intent to remain in academia among nursing faculty with RFDD and who teach at baccalaureate level or higher.

Aim 3: To test the applicability of the effort-reward imbalance (ERI) model to explain the nature of the relationships between job stress, job satisfaction and intent to remain in academia among RFDD prepared nursing faculty teaching at the baccalaureate level or higher. Specifically, the study determined how the perception of job stress influenced job satisfaction and intent to remain in academia.

Research Questions and Hypotheses

RQ1. What is the relationship between job stress and job satisfaction among nursing faculty with RFDD who teach at the baccalaureate level or higher?
**H1o:** There is no relationship between job stress and job satisfaction.

**H1a:** There is a negative relationship between job stress and job satisfaction.

The Pearson R cor relational analysis was used to explore the relationship between job stress and job-satisfaction scores of the respondents.

**RQ2.** What is the relationship between job stress and intent to remain in academia among nursing faculty with RFDD who teach at the baccalaureate level or higher?

**H2o:** There is no relationship between nursing faculty job stress and intent to remain in academia.

**H2a:** There is a negative relationship between nursing faculty job stress and intent to remain in academia.

The Pearson R cor relational analysis was used to explore relationships between job stress and IRA scores of the respondents.

**RQ3.** What is the relationship between job satisfaction and intent to remain in academia among nursing faculty with RFDD who teach at the baccalaureate level or higher?

**H3o:** There is no relationship between nursing faculty job satisfaction and intent to remain in academia.

**H3a:** There is a positive relationship between nursing faculty job satisfaction and intent to remain in academia.

The Pearson R cor relational analysis was used to explore relationships between job-satisfaction and intent to remain in academia scores of the respondents.

**RQ4.** Does job stress influence job satisfaction among current nursing faculty with RFDD who teach at the baccalaureate level or higher?
H4o: There is no influence of nursing faculty job stress on job satisfaction.

H4a: There is a negative influence of nursing faculty job stress on job satisfaction.

Multiple regression analysis was conducted to determine any predictive values of the personal demographic characteristics, the professional demographic characteristics, and the stress factors concerning job satisfaction and intent to remain in academia. All levels of significance were set at .05.

RQ5. Does job stress influence intent to remain in academia among current nursing faculty with RFDD who teach at the baccalaureate level or higher?

H5o: There is no influence of nursing faculty job stress on intent to remain in academia.

H5a: There is a negative influence of nursing faculty job stress on intent to remain in academia.

Multiple regression analysis was used to determine any predictive values of the personal demographic characteristics, the professional demographic characteristics, and the stress factors concerning job satisfaction and intent to remain in academia. All levels of significance were set at .05.

RQ6. How does job satisfaction mediate the relationship between intent to remain in academia and job stress among nursing faculty with RFDD who teach at the baccalaureate level or higher?

H6o: Job satisfaction does not mediate the relationship between intent to remain in academia and job stress.
**H6a**: Job satisfaction mediates the relationship between intent to remain in academia and job stress.

A logistic regression analysis was conducted to determine the influence of job stress and job satisfaction on IRA. Mediation analysis will be conducted to determine if job satisfaction mediates the relationship between IRA and job stress.

**Subjects**

The study population was made up of 362 nursing faculty who met the inclusion criteria stipulated for participation. The target population for this study was research-focused doctoral degree (RFDD) faculty members who teach in baccalaureate levels or higher in nursing schools across the United States.

**Inclusion criteria.**

1. Faculty members with RFDDN who had completed at least one year of a full time teaching assignment in a baccalaureate program or higher.

2. Schools of nursing with at least 5 full-time faculty members across the United States of America. Schools should be listed on the American Association of Colleges of Nursing.

3. Faculty must be able to read and write in English to participate in the study.

**Exclusion criteria.**

1. Faculty members who had not earned an RFDDN.

2. Nurse faculty members who did not teach at the baccalaureate level or higher.

3. Visiting professors.
**Sampling.** A convenience sample of nurse faculty members was obtained from a list of all nursing schools in the United States that offer baccalaureate and graduate degrees compiled by the American Association of Colleges of Nursing. Deans’ and directors’ email addresses were searched online and utilized for communication via the internet. All communication with study participants was conducted through the deans of colleges of nursing, who served as contact persons. The Deans identified faculty members who met the inclusion criteria and forwarded the survey link to all study participants.

**Procedure.** Letters were sent via email to the dean/director of participating universities. The letter included the purpose of the study and its significance, information on instruments, number of items, and approximate amount of time needed for participation. Deans were asked to forward a link of the survey to faculty members who met the inclusion criteria. Study participants were assured that only aggregate data would be reported and that confidentiality of faculty responses would be maintained. All data collected were safely stored on the researcher’s computer, accessible only by the researcher. Please see Appendix C for the Northeastern University Institutional Review Board (IRB) approval of the study.

The questionnaires were administered via Survey Monkey™ and SPSS software version 21 was used for data analysis. The survey link was sent twice at three-week intervals after the initial survey was sent to the nursing department deans to remind faculty members who had not responded to the survey to complete the survey.

**Measures/Instruments.** The research survey included questions assessing the study variables and a demographic section that was created by the researcher with content validity.
reviewed and accepted by three expert faculty members. Two established instruments—the ERI and JIG/JDI questionnaires—were employed for the study.

**Operational Definition of Variables**

The variables for this study are the independent variable, job stress, and dependent variables, job satisfaction and intent to remain in academia.

**Independent variable: Job Stress.** The conceptual definition of job stress in this study is defined as an imbalance between effort/workload and reward/pay resulting in stress as defined by Siegrist (2001). Job stress will be determined using the ERI questionnaire to measure nursing faculty effort-reward imbalance. The instrument is comprised of three subscales. The subscales include effort, reward and overcommitment. Each of these subscales measures a dimension of job stress. The ERI model has been operationalized as a standardized self-reporting measure containing 22 Likert scaled items. These items represent three one-dimensional scales: effort (5 items), reward (11 items), and overcommitment (6 items) with each item rated on a four point Likert scale ranging from 1-4. Satisfactory internal consistencies of the three scales: “Effort,” “reward,” and “over commitment,” were obtained with Cronbach’s alpha of 0.77, 0.82, and 0.83, respectively by Liu, Chang, Fu, Wang, & Wang, (2012). Evidence of criterion validity has also been demonstrated in studies using data from working men and women from European countries (Siegrist et al., 2004; Tsutsumi et al., 2009).

The Effort subscale measures job stress associated with time pressure due to workload. For example, a total score based on the six items measuring extrinsic effort varies between 6 and 24. It is assumed that as the subject experiences more extrinsic effort at work, the higher
the score. In an email communication with the instrument developer, it was established that there is solid evidence that people scoring in the upper third of the score distribution are at an elevated risk of job stress and job stress-related disorders (Siegrist, personal communication, February 1, 2012) in Appendix B. Published data document satisfactory internal consistency in terms of Cronbach’s alpha (usually >.70) of the three scales of effort, reward, and overcommitment among a wide range of working populations including academic employees, (Kinman & Jones, 2008; Tsutsumi & Kwakami, 2004; Willis, O’Connor & Smith, 2008).

Reward subscale is measured by eleven items (items ERI7-ERI17) and consists of a three-factorial structure of job reward with a first factor defined by financial and status-related aspects (ERI11, ERI14, ERI16-ERI17), a second factor defined by esteem rewards (ERI7-ERI10, ERI15), and a third factor (ERI12-ERI13) defined by gratification with job security (Siegrist, Tsutsumi, Nagami, Morimoto & Matoba, 2002). This subscale measures stress associated with low reward. Scores above 50% indicate stress. The Cronbach’s alpha for this subscale is .866. Table is a summary of Cronbach’s alpha for study scales and subscales.

Effort-reward imbalance (ERI) is mathematically defined as e/ (rxc) where e is the sum total of effort score, r is the sum total of reward score and c is the correction factor. The correction factor is 0.5 if the numerator contains five items and the denominator contains 10 items (Siegrist et al., 2004). A value close to 0 is a favorable condition whereas a value of one and above indicates a high workload that is not reciprocated by fair reward (Siegrist et al., 2004).

Overcommitment is defined as a set of attitudes, behaviors, and emotions that reflect excessive striving in combination with a strong desire for approval and esteem (Siegrist et al.,
Analyses of the ERI model show that employees who report overcommitment to their jobs, and therefore exert a high level of effort, may experience an increased risk of psychological and physical disorders if they perceive rewards as low (Akinori, Masaya, & Mashiro, 2011). Overcommitment is measured using six items, each on a four point Likert scale, with responses ranging from “strongly agree” to “strongly disagree.” Scores in the upper tertile of the distribution range indicate overcommitment (Siegrist, personal communication, February 1, 2012).

**Dependent variable: Job Satisfaction.** Job satisfaction is defined as nurse faculty global or overall satisfaction with the job. For this study, the Job in General instrument (JIG) (Smith et al., 1969) was used to measure job satisfaction. This instrument consists of 18 items.

The JDI is a questionnaire whose development began in the early 1960s and was first published by Smith, Kendall, Hulin, and Miller in 1969. JDI measures five facets of job satisfaction: work on present job, pay, and opportunities for promotion, supervision and coworkers. Each of the five facets predict outcomes such as turnover and intentions to stay or quit one’s job.

To date, the JDI/JIG is the most commonly used scale to assess job satisfaction among employees from multiple organizations including nursing faculty has been tested and found reliable and valid by many researchers (Gui, et al., 2009b; Kinicki, McKee-Ryan, Schriesheim, & Carson, 2002; McCracken, 2001).

The overall reliability coefficient is .90 (Kinicki et al., 2002), demonstrating a high internal consistency. The subscales have reliability coefficients of 0.85 (Work on Job); 0.81 (Pay); 0.89 (Opportunities for Promotion): 0.90 (Supervision): 0.86 (People on Job), and 0.87
(Job in General). The construct validity of the JIG/JDI is supported by (a) acceptable estimates of internal consistency and test-retest reliability, (b) results that conform to a nomological network of job satisfaction relationships, and (c) demonstrated convergent and discriminant validity (Bowling & Hammond, 2008). High scores above fifty percent for each item implies job satisfaction.

Cronbach’s alpha for the JDI/JIG scales are reported in Table 1. The response scaling is a three-response choice: the respondent agrees (yes), is not sure (?), or does not agree (no) to the question. First developed in the early 1960s, these questionnaires were published by Smith, Kendall, Hulin, and Miller in 1969. The JIG/JDI instrument is unique among measures of job satisfaction because of its continual revision. The original version which was first published in 1969 was revised in 1985, 1997, and most recently in 2009. The JIG/JDI has been translated into nine different languages and employed in at least 17 countries (Kinicki, et al., 2002).

**Dependent variable: Intent to remain in academia.** Intent to remain in academia is conceptually defined as a nurse faculty member’s declaration of intent to stay in his or her academic role in the next five years. This variable will be measured as a single question “Do you intend to remain in academia in the next five years?”

**Demographic variables.** Data on demographic and salary profiles were collected via an investigator-developed data collection instrument. A panel of three faculty experts reviewed the content of the demographic instrument to determine content validity.

**Data collection, Processing and Analysis**

Data were downloaded into an SPSS file from Survey Monkey™ and data analysis was conducted using SPSS version 21 statistical software. Data were cleaned and initial statistical
tests conducted included descriptive analysis of demographic data. Multiple linear regression analyses were conducted to test study hypotheses. To test for mediation, a series of multiple regressions was conducted in accordance with mediation testing proposed by Baron & Kenny (1986).

This study uses a quantitative cross-sectional survey design to collect data from nurse educators working in departments and schools of nursing that are members of the American Association of Colleges of Nursing. To participate, schools and colleges of nursing must offer Baccalaureate level or higher degrees of education in nursing to students. The correlational design will calculate the correlation matrix between the dependent and independent variables.

A descriptive analysis of responses will be summarized in table form. Correlation and regression analyses will be performed to measure the effect of the independent variable on job satisfaction and intent to remain in academia. Furthermore, multiple regression analysis was used to predict the effect of job stress on job satisfaction and intent to remain in academia.

Demographic profiles of the study sample were collected and presented through frequency tables. Multiple regression analyses were conducted using ERI and JDI scores among the demographic factors. For example, age groups, salary, and length of years of teaching experience, were analyzed to answer the research questions and hypothesis.

**Assumptions**

It is assumed that the respondents of this study answered the survey questions with fidelity. It is also assumed that respondents met the inclusion criteria as stated. Another assumption of the study is that respondents identified their academic qualification accurately. An
additional assumption, based on the ERI theoretical framework, is that nurse faculty are overworked and underpaid and therefore dissatisfied with their job and intend to quit academia.

**Limitations of the Study**

A major limitation of this study is the individual’s interpretation of job stress and job satisfaction through self-reporting mechanisms. A challenge of any research survey is finding and recruiting participants from the target population. This challenge was compounded by the distribution limitations of working with an online survey. While an online survey has the potential to increase the ease of response within a target population, some members of the target population may not have participated because of their uneasiness with online interactions. Another limitation is that while an online survey may provide an easier means to administer questionnaires and collect data, the researcher’s control was limited. This study also utilized a convenience sample; therefore, the findings are not generalizable.

Another limitation is the length of the survey, which may take approximately 20 minutes to complete. Some respondents may not have the time. Incomplete surveys and low returns were a challenge. There was also the potential for response bias due to social desirability or fear of responses not being anonymous. Using an online survey may have increased confounding variables of the study.

Another limitation is that many schools of nursing employ nurses with masters’ degrees; these faculty members were excluded here. Nurses with doctorates of nursing practice were also excluded, but job stress and satisfaction may be different among faculty members whose focus is clinical practice rather than research.

Colleges and schools of nursing were not identified as public or private, but there could
be differences between public and private universities in pay, benefits, and job responsibilities, which could influence the major variables in this study. Another limitation is the exclusion of non English speaking nurse faculty members.

**Delimitations of the study**

The study is delimited to nurse faculty with research focused doctoral degrees teaching at the baccalaureate level and higher in the United States.

**Ethical Assurances**

The study received approval from the Northeastern University Institutional Review Board (IRB). Strict privacy measures were undertaken to ensure privacy of all individuals who participated in the study. To ensure privacy of respondents, an informed consent (Appendix C) was sent via email to participants. In addition, participants were provided information about the purpose of the study. Assurance of confidentiality was conveyed to the participants as well, and they were informed that they could withdraw from the study at any time without consequences. Confidentiality of the data collected was maintained with data stored on the password protected and locked computer of the researcher.

**Summary**

Chapter three discussed the research methodology used in this study, which was a cross-sectional quantitative predictive research design. Data were obtained using survey questionnaires to assess study variables, which were comprised of demographic variables, job stress, job satisfaction, and a single item on intent to remain in academia. This study provided insight into the extent of nurse faculty job stress, job satisfaction and intent to remain in academia among nurse faculty with RFDD who teach at the baccalaureate level or higher. In
addition, the relationships between major study variables were examined. Regression analyses were conducted to examine the influence of job stress on job satisfaction and IRA. This research also tested the ERI model developed by Siegrist (1996) using nurse faculty with RFDD in the United States. Analyses of JDI were used to describe variables that influence job satisfaction among nurse faculty. Results are reported in chapter four.
CHAPTER 4: DATA ANALYSIS AND FINDINGS

The nurse faculty job stress and job satisfaction survey was launched in May 2013. The survey was open for a period of five weeks to faculty who met the inclusion criteria. Deans and chairpersons served as faculty contact points. Three weeks after initial email contact with respondents, a final email was sent to remind faculty to participate. The survey was closed weeks after the reminder email was sent, at which time responses had decreased to two or three responses a day. Data were reviewed and respondents who did not meet the inclusion criteria of having a research focused doctoral degree in nursing or related fields were eliminated. The number of faculty members who began the survey was 487. Four hundred and twenty-eight faculty members completed the survey and 363 respondents met the inclusion criteria. Data analyses were performed using SPSS version 21 software.

The aim of this research was to explore the relationships among nurse faculty job stress, job satisfaction and intent to remain in academia among faculty with research focused doctoral degrees (RFDD) who taught at the baccalaureate level or higher. A second aim was to identify factors that influence job stress, job satisfaction and intent to remain in academia among nursing faculty with research focused doctoral degrees (RFDD) who taught at baccalaureate level or higher. A third aim was to test the ERI model to effectively explain the nature of relationships among job stress, job satisfaction and intent to remain in academia among RFDD prepared nursing faculty who taught at baccalaureate level or higher. Specifically, the study determined how the perceptions of an imbalance between nursing faculty effort at work and reward influenced their job satisfaction and intent to remain in academia.
This chapter begins with instrument reliability of ERI, JDI/JIG and IRA followed by descriptive statistics, frequency and percentage summaries. The results of the correlation and multiple linear regression analyses then follow. This chapter concludes with a summary and discussion of all statistical tests and findings.

**Instrument Reliability**

The instruments used in this study have established validity and reliability and demonstrated moderate to high internal consistency. Table 1 shows reliability analysis results for the *ERI* and *JDI/JIG* instruments used in this study. The overall Cronbach’s alpha for *ERI*, which measured stress, was 0.71, and *JDI*, which measured job satisfaction, was 0.954. The overall Cronbach’s alpha for *JIG* was .914. Reliability of instruments and subscales are found in Table 1. Table 2 illustrates the frequency distribution of responses concerning faculty intent to remain in academia for the next five years. Eighty-one percent (n =281) of faculty members intend to remain on the job in the next five years.
Table 1.

*Reliability of ERI subscales and JDIJG facets*

<table>
<thead>
<tr>
<th></th>
<th>Cronbach’s Alpha</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Effort Reward Imbalance (ERI)</strong></td>
<td>.717 (N=22)</td>
<td>2.81</td>
</tr>
<tr>
<td><strong>ERI Subscales:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effort</td>
<td>.806 (N=6)</td>
<td>2.87</td>
</tr>
<tr>
<td>Reward</td>
<td>.866 (N=10)</td>
<td>2.89</td>
</tr>
<tr>
<td>Overcommitment</td>
<td>.845 (N=6)</td>
<td>2.61</td>
</tr>
<tr>
<td><strong>Job Descriptive Index (JDI)</strong></td>
<td>.954 (N=72)</td>
<td>2.20</td>
</tr>
<tr>
<td><strong>JDI Subscales:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Present Work</td>
<td>.895 (N=18)</td>
<td>2.33</td>
</tr>
<tr>
<td>Supervision</td>
<td>.933 (N=18)</td>
<td>2.19</td>
</tr>
<tr>
<td>Pay</td>
<td>.879 (N=9)</td>
<td>1.75</td>
</tr>
<tr>
<td>Promotion</td>
<td>.933 (N=9)</td>
<td>1.59</td>
</tr>
<tr>
<td>Coworker</td>
<td>.907 (N=18)</td>
<td>2.44</td>
</tr>
<tr>
<td><strong>Job in General (JIG)</strong></td>
<td>.914 (N=18)</td>
<td>2.84</td>
</tr>
</tbody>
</table>

ERI subscale scores range 1-4
JDI subscales scores range 0-3
Table 2.

*Faculty Intent to Remain in Academia (N=345)*

<table>
<thead>
<tr>
<th>Intent to remain in academia</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>64</td>
<td>18.6</td>
</tr>
<tr>
<td>Yes</td>
<td>281</td>
<td>81.4</td>
</tr>
<tr>
<td>Total</td>
<td>345</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Although 47% \((n=168)\) of the respondents reported job stress in the faculty role, faculty participants reported high job satisfaction and intent to remain in academia. Ninety-five percent \((n=337)\) of respondents reported they agreed or strongly agreed to giving high effort on the job while 92% \((n=326)\) reported they agreed or strongly agreed to receiving low reward from the job. Eighty-three percent reported they were overcommitted to the job. Job satisfaction was reported by 92% \((n=326)\). In the JDI, satisfaction with present job was reported by 89% \((n=312)\) of nursing faculty. Eighty-eight percent \((n=315)\) of faculty reported satisfaction with coworkers and 77% \((n=269)\) stated they were satisfied with supervision on the job. The lowest satisfaction rates were reported for pay at 60% \((n=209)\) and for promotion opportunities at 49% \((n=170)\).

**Demographics of Sample**

The researcher created fifteen demographic and profile characteristics that included questions regarding the participant’s age, gender, race, state of residence, number of dependent
children, faculty rank, tenure status, and salary. Other demographic questions included highest degree earned, nursing practice specialization, number of years as a faculty member, and hours worked per week. Other questions related to paid employment outside the faculty position and number of students taught in an academic year. Please see Appendix D for a summary of participants’ demographic data.

Data analysis revealed that ninety-four percent \((n=214)\) were female and six percent \((n=21)\) male. Faculty ethnicity was 91\% \((n=309)\) Caucasian and the remaining 10\% \((n=30)\) were Asian, African American/Black and Hispanic/Spanish, Native American, or Pacific Islander combined. Sixty-two percent \((n=199)\) of the faculty members were 56 years or older, and only 11\% \((n=35)\) were between 25 years to 45 years old. The average faculty age was 56.4 years \((SD=7.9)\), with a range of 26-73 years old. The average number of students taught by faculty in a year was 117 students, \((SD=96)\), with a range of zero to 520 students. On average, faculty members worked 50 hours a week; a majority 65\%, \((n=224)\) worked 41-60 hours a week. Of the 167 faculty members who reported holding a second job, 70\% \((n=117)\) worked up to 20 hours a week on the second job for supplemental income. Only 19\% \((n=66)\) of faculty worked in schools that were unionized. Approximately 23\% \((n=79)\) of faculty reported they were responsible for children under 18 years living in their households. Seventy-seven percent of faculty did not have dependent children under 18 years old living at home. This suggests most faculty members have grown children who are no longer dependent on them.

Sixty percent \((n=209)\) of faculty reported being satisfied with their pay. Thirty-six percent \((n=109)\) of faculty received an annual salary of $60,000 to $79,000, and 25\% \((n=79)\)
received more than $100,000 a year. Approximately 71% \( (n = 239) \) of faculty held a research focused doctoral degree in nursing and 29\% \( (n = 96) \) of respondents held research focused doctoral degrees in related fields. Eighty-one percent \( (n = 281) \) intended to stay in academia for the next five years. Forty-nine percent \( (n = 170) \) of faculty was tenured and 51\% \( (n = 174) \) stated they were not tenured. Thirty-one percent \( (n = 104) \) of respondents were professors, 36\% \( (n = 121) \) associate professors, and 30\% \( (n = 101) \) assistant professors. Clinical professors made up <1\% \( (n = 2) \), clinical associate professors made up 1\% \( (n = 4) \), and clinical assistant professors made up 2\% \( (n = 8) \) of study participants.

**Testing for assumptions**

A graphical analysis for the major variables was completed to investigate data outliers from responses for the independent variable, job stress, and for the dependent variables, job satisfaction and IRA. Multiple regression analysis assumes data are normally distributed. A Kolmogorov-Smirnov Test statistic for normality was performed to investigate this assumption. A summary of the test for normality appears in Table 3 below. The results of the test of normality indicated that ERI, JIG and IRA all have a significance level of <.001.
Table 3.

*Tests for Normality (N337)*

<table>
<thead>
<tr>
<th></th>
<th>Kolmogorov-Smirnov&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Shapiro-Wilk</th>
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<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>df</td>
</tr>
<tr>
<td>ERI</td>
<td>.104</td>
<td>336</td>
</tr>
<tr>
<td>JIG</td>
<td>.195</td>
<td>336</td>
</tr>
<tr>
<td>IRA</td>
<td>.498</td>
<td>336</td>
</tr>
</tbody>
</table>

<sup>a</sup> Lilliefors Significance Correction

**Results**

The Pearson correlation analysis in Table 4 below illustrates findings of correlation coefficients among major influencing variables. A correlational strength from 0.0 to 0.35 is generally considered to represent low or weak correlations, 0.36 to 0.67 modest or moderate correlations, and 0.68 to 1.0 strong or high correlations (Taylor, 1990). This research explored the relationships between ERI and subscales, JDI/JIG subscales and IRA. In order to address the research questions, correlational, multiple regression and mediation analyses were conducted.
Table 4.

Pearson correlations among ERI and subscales, JDI/JIG facets and IRA

<table>
<thead>
<tr>
<th></th>
<th>ERI</th>
<th>JIG</th>
<th>IRA</th>
<th>Effort</th>
<th>Reward</th>
<th>Overcommitment</th>
<th>Coworkers</th>
<th>Present job</th>
<th>Supervision</th>
<th>Promotion</th>
<th>Pay</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERI</td>
<td>1</td>
<td>-.674∗</td>
<td>-.092</td>
<td>.694∗</td>
<td>-.802∗</td>
<td>.390∗</td>
<td>-.508∗</td>
<td>-.377∗</td>
<td>-.607∗</td>
<td>-.466∗</td>
<td>-.253∗</td>
</tr>
<tr>
<td>JIG</td>
<td>.207∗</td>
<td>-.314∗</td>
<td>.684∗</td>
<td>-.294∗</td>
<td>.629∗</td>
<td>.638∗</td>
<td>.561∗</td>
<td>.443∗</td>
<td>.254∗</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IRA</td>
<td>.009</td>
<td>.145∗</td>
<td>-.072</td>
<td>.114†</td>
<td>.172†</td>
<td>.144∗</td>
<td>.159†</td>
<td>.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effort</td>
<td>-.305∗</td>
<td>.516∗</td>
<td>-.202∗</td>
<td>-.098</td>
<td>-.294∗</td>
<td>-.165∗</td>
<td>-.165∗</td>
<td></td>
<td></td>
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<tr>
<td>Reward</td>
<td>-.277∗</td>
<td></td>
<td></td>
<td>-.562∗</td>
<td>.538∗</td>
<td>.669∗</td>
<td>.623∗</td>
<td>.284∗</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Overcommitment</td>
<td>-.149∗</td>
<td>-.220∗</td>
<td>-.127∗</td>
<td>-.206∗</td>
<td>-.148∗</td>
<td></td>
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<tr>
<td>Coworkers</td>
<td></td>
<td>.526∗</td>
<td>.523∗</td>
<td>.348∗</td>
<td>.236∗</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Present job</td>
<td></td>
<td></td>
<td>.351∗</td>
<td>.405∗</td>
<td>.255∗</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Supervision</td>
<td></td>
<td></td>
<td></td>
<td>.427∗</td>
<td>.199∗</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promotion</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>.194∗</td>
<td></td>
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<tr>
<td>Pay</td>
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</table>

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Research questions and hypotheses

**RQ1.** What is the relationship between job stress and job satisfaction among nursing faculty with RFDD who teach at the baccalaureate level or higher?

**H1o:** There is no relationship between job stress and job satisfaction.

**H1a:** There is a negative relationship between job stress and job satisfaction.

To answer research question one and test the hypothesis, a correlational analysis was performed and the result is found in Table 4 above. For the major variables of the study, data analysis revealed a moderate-to-strong negative correlation between ERI and JIG, \( r (347) = - \)
.674, p < .001 meaning as faculty experienced more stress on the job, they became less satisfied with the job. The more job stress experienced by faculty, the less their overall job satisfaction. The null hypothesis was rejected in favor of the alternate hypothesis which states there is a negative relationship between job stress and job satisfaction. This finding is similar to previous studies (Ahsan, 2009; Gui, Barriball, & While, 2009a; Whalen, 2009a).

**RQ2.** What is the relationship between job stress and intent to remain in academia among nursing faculty with RFDD who teach at the baccalaureate level or higher?

**H2o:** There is no relationship between nursing faculty job stress and intent to remain in academia.

**H2a:** There is a negative relationship between nursing faculty job stress and intent to remain in academia.

Data analysis for research question two showed a very weak negative relationship between job stress and intent to remain in academia, $r (339) = -.092$, $p < .01$. This means the more faculty experienced job stress, the less likely they were to remain in academia. The null hypothesis was rejected in favor of the alternate hypothesis. However, the relationship between job stress and intent to remain in academia was weak.

**RQ3.** What is the relationship between job satisfaction and intent to remain in academia among nursing faculty with RFDD who teach at the baccalaureate level or higher?

**H3o:** There is no relationship between nursing faculty job satisfaction and intent to remain in academia.

**H3a:** There is a positive relationship between nursing faculty job satisfaction and intent to remain in academia.
Again, the null hypothesis was rejected in favor of the alternate hypothesis. The relation between job satisfaction and intent to remain in academia was found to be low positive, $r (339) = .207, p < .001$. This means faculty stayed on the job longer if they experienced job satisfaction.

Other correlational findings revealed that there was no relation between faculty satisfaction with pay and intent to remain in academia, $r (335) = .00, p < .001$, meaning faculty intent to remain in academia was not based on satisfaction with pay. Interestingly, there was a strong inverse relation between job stress and reward. As reward increased, job stress decreased, $r (356) = -.802, p < .001$. This indicates there is need to increase nurse faculty reward to help decrease job stress. According to Zhou and Volkwein (2004), rewards are also linked to faculty productivity and faculty intent-to-stay. Lyons and Akroyd (2014) also found that faculty who were satisfied with the fairness of their compensation including salary, benefits, and workload were 1.8 times more likely to be satisfied with their jobs than faculty who were not satisfied with their compensation (Lyons & Akroyd, 2014).

Additional findings showed negative correlations between job stress and supervision, $r (341) = -.607, p < .001$, coworkers $r (352) = -.508, p < .001$, promotion $r (346) = -.466, p < .001$, present job $r (348) = -.377, p < .001$ and pay $r (346) = -.253, p < .001$. This means that the more stress experienced by faculty, the less satisfied they were with supervision, coworkers, promotion, present job, and pay. There was a positive correlation between job stress and effort, $r (358) = .694$, and overcommitment, $r (358) = .390, p < .001$, meaning the more overcommitted and more effort put into in their work, the more job stress they experienced.
There also was a moderate positive correlation between job satisfaction and reward \( r (350) = .684, p < .00 \), coworker satisfaction, \( r (352) = .629, p < .001 \), supervision \( r (346) = .561, p < .001 \), and present work \( r (346) = .638, p < .001 \). Intent to remain in academia however demonstrated a weak relation with all other factors except pay, with which there was no relation.

**Simple Linear Regression**

Linear regression was conducted to examine the extent to which job stress influenced job satisfaction. The results of the linear regression analysis are found in Table 5 below.

**RQ4.** Does job stress influence job satisfaction among current nursing faculty with RFDD who teach at the baccalaureate level or higher?

**H4o:** There is no influence of nursing faculty job stress on job satisfaction.

**H4a:** There is a negative influence of nursing faculty job stress on job satisfaction.

As can be seen from Table 5 below, a linear regression analysis was conducted to test if job stress significantly predicted job satisfaction. The result of the regression indicated that job stress accounted for 46\% of the variance in job satisfaction, \( R^2 = .455 \), adjusted \( R^2 = .453 \), \( F (1,347) = 289.184, p < .01 \). The findings showed that job stress significantly predicted job satisfaction \( (\beta = -.674, p < .01) \). The null hypothesis was rejected in favor of the alternate hypothesis. This means that for each unit increase in job stress, job satisfaction decreases by .674. The sample correlation coefficient was - .674, meaning that there was a moderate to strong positive correlation between job stress and job satisfaction.
Table 5.

**Regression Model of Job Stress on Job Satisfaction**

<table>
<thead>
<tr>
<th>Model</th>
<th>b</th>
<th>SE</th>
<th>B</th>
<th>t</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Constant)</td>
<td>64.033</td>
<td>1.204</td>
<td>53.176</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>ERI</td>
<td>-18.282</td>
<td>1.075</td>
<td>-0.674</td>
<td>-17.005</td>
<td>.000</td>
</tr>
</tbody>
</table>

a. Dependent Variable: JIG

R² = .455, adjusted R²=.453, F (1, 347) = 289.184, p= <.01

RQ5. Does job stress influence intent to remain in academia among current nursing faculty with RFDD who teach at the baccalaureate level or higher?

H₅₀: There is no influence of nursing faculty job stress on intent to remain in academia.

H₅ₐ: There is a negative influence of nursing faculty job stress on intent to remain in academia.

For research question five, findings from a simple linear regression analysis in Table 6 below were used to test if job stress significantly predicted intent to remain in academia. The result of the regression analysis indicated that job stress explained 0.6% of the variance in intent to remain in academia, (R² = .008, adjusted R²=.006, F (1,339) = 2.894, p<.09). It was found that job stress did not significantly predict intent to remain in academia (β= -.092, p= <.09). The null hypothesis could not be rejected. This means job stress did not influence nurse faculty intent to remain. The large number of faculty 81% (n =275) who intend to remain in academia will do so despite job stress.
Table 6.

Regression model of intent to remain in academia on job stress

<table>
<thead>
<tr>
<th>Model</th>
<th>b</th>
<th>SE</th>
<th>B</th>
<th>t</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Constant)</td>
<td>.907</td>
<td>.060</td>
<td>-</td>
<td>15.179</td>
<td>.000</td>
</tr>
<tr>
<td>ERI</td>
<td>-.091</td>
<td>.053</td>
<td>.092</td>
<td>-1.701</td>
<td>.090</td>
</tr>
</tbody>
</table>

a. Dependent Variable: IRA

R² = .008, adjusted R²=.006, F (1, 339) = 2.894, p< .090

Mediation Analysis on Relationship between IRA and Job Stress via Job Satisfaction

To answer question six, a series of regression analyses were conducted to determine mediating effect of job satisfaction, if any on the relationship between job stress and intent to remain in academia. A logistic regression analysis was conducted to examine the influence of job stress and job satisfaction on intent to remain in academia in Tables 7 and 8 below.

**RQ6.** How does job satisfaction mediate the relationship between intent to remain in academia and job stress among nursing faculty with RFDD who teach at the baccalaureate level or higher?

**H6o:** Job satisfaction does not mediate the relationship between intent to remain in academia and job stress.

**H6a:** Job satisfaction mediates the relationship between intent to remain in academia and job stress.
Logistic Regression Analysis

Logistic regression analysis was conducted using intent to remain in academia as the dependent variable and job stress and job satisfaction as predictor variables. Tables 7 and 8 illustrate the results of logistic regression, conducted to predict intent to remain in academia. A test of the full model against a constant only model was statistically significant, indicating that as a set, the predictors reliably distinguished between intent to remain and not to remain in academia (chi square 16.108, p < .001 with df 2). Nagelkerke’s R² of 0.076 indicated a weak relationship between prediction and grouping. Prediction success overall was 81%, (98.9% for intent to remain in academia and 6.5% not to remain in academia). The Wald criterion demonstrated that only job satisfaction made a significant contribution to prediction (p < 0.001). Job stress was not a significant predictor of intent to remain in academia. EXP (B) value indicates that when job satisfaction was raised by one unit, the odds ratio was 1.063 times as large and therefore nurse faculty were 1.063 more times likely to remain in academia. This result compares to the regression analysis result discussed earlier in Table 5 and 6, indicating job satisfaction influenced intent to remain in academia whereas job stress did not influence intent to remain in academia.
Table 7.

*Observed and Predicted Frequencies for IRA Logistic Regression with a Cutoff of 0.500*

<table>
<thead>
<tr>
<th>Observed</th>
<th>Predicted intent to remain in academia</th>
<th>% Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Retention</td>
<td>4</td>
<td>58</td>
</tr>
<tr>
<td>Yes</td>
<td>3</td>
<td>272</td>
</tr>
<tr>
<td>Overall % correct</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. The cut value is .500

Table 8.

*Logistic regression analysis*

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERI</td>
<td>.653</td>
<td>.459</td>
<td>2.018</td>
<td>1</td>
<td>.155</td>
<td>1.921</td>
</tr>
<tr>
<td>JIG</td>
<td>.061</td>
<td>.017</td>
<td>13.538</td>
<td>1</td>
<td>.000</td>
<td>1.063</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.862</td>
<td>1.117</td>
<td>2.779</td>
<td>1</td>
<td>.095</td>
<td>.155</td>
</tr>
</tbody>
</table>

a. Variable(s) entered on step 1: IRA

Multiple linear regression analysis was conducted to examine the mediation effect of job satisfaction on the relationship between job stress and intent to remain in academia. The findings of the analyses are found in Table 9 below.

A mediation analysis was conducted to answer the question posed above, and also to determine if job satisfaction mediated the relationship between intent to remain in academia and job stress. The findings revealed job satisfaction had no direct effect on the relationship
between job stress and intent to remain in academia. However, it was determined that job satisfaction had an indirect effect on the relationship between intent to remain in academia and job stress.

Table 9 illustrates the model summary of multiple linear regression analysis for mediation. Results indicated model 1 had a multiple correlation coefficient (R) of 0.084, which indicated that the regression model containing job stress as an independent variable had a poor relation to the dependent variable of intent to remain in academia. Additionally, 0.7% (R² = .007) of the variance in intent to remain in academia was explained by job stress. On the other hand, in model 2, job stress as an independent variable along with the mediating variable job satisfaction indicated a poor prediction of the dependent variable intent to remain in academia with a multiple correlation coefficient of .234. In addition, 5.5% (R² = 0.055) of the variance was explained by the linear combination of job stress and job satisfaction.

Table 9.

Model Summary Of Multiple Linear Regression for Mediation

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.084&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.007</td>
<td>.004</td>
<td>.38724</td>
</tr>
<tr>
<td>2</td>
<td>.234&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.055</td>
<td>.049</td>
<td>.37842</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), ERI
b. Predictors: (Constant), ERI, JIG

The ANOVA summary of the mediation output is found in Table 10 below. The results indicated that the regression model 1 was not a good fit for the data therefore regression model
1 with ERI as an independent variable, did not significantly predict IRA ($F(1,335) = 2.40, p = .122$). Regression model 2 however was a good fit for the data and that job stress as an independent variable along with job satisfaction as a mediating variable, significantly predicted IRA ($F(2,334) = 9.65, p = .000$) at 0.05 significance level. It can be noted that there was a substantial decrease in p-value from model 1 to model 2 which indicated there was a mediating effect on the relationship between intent to remain in academia and job stress via job satisfaction.

Table 10.

ANOVA Summary Output for Mediation Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>.360</td>
<td>1</td>
<td>.360</td>
<td>2.399</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>50.234</td>
<td>335</td>
<td>.150</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>50.593</td>
<td>336</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Regression</td>
<td>2.764</td>
<td>2</td>
<td>1.382</td>
<td>9.650</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>47.830</td>
<td>334</td>
<td>.143</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>50.593</td>
<td>336</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: IRA  
b. Predictors: (Constant), ERI  
c. Predictors: (Constant), ERI, JIG

Table 11 below presents the estimated regression coefficients for models 1 and 2 of the multiple linear regression for mediation analysis. Results indicated in Model 1 that job stress was again not a significant predictor of intent to remain in academia ($t= - 1.55, p = 0.122$). Model 2 showed the same result where job stress was not a significant predictor of intent to remain in academia, ($t = 1.572, p = .117$). However, job satisfaction was a significant predictor of intent to
remain in academia, JIG (t = 4.097, p = .000) at a 0.05 level of significance. Similarly, there is a
decrease in p-value from model 1 to model 2 which indicated job satisfaction mediated the
relationship between intent to remain in academia and job stress. This means if faculty
experience job satisfaction, they will remain in academia even if job stress was high.

Table 11.
*Multiple Linear Regression Coefficients*

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>95.0% Confidence Interval for B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std.Error</td>
<td>Beta</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>.903</td>
<td>.060</td>
</tr>
<tr>
<td></td>
<td>ERI</td>
<td>-.083</td>
<td>.053</td>
</tr>
<tr>
<td>2</td>
<td>(Constant)</td>
<td>.218</td>
<td>.177</td>
</tr>
<tr>
<td></td>
<td>ERI</td>
<td>.110</td>
<td>.070</td>
</tr>
<tr>
<td></td>
<td>JIG</td>
<td>.011</td>
<td>.03</td>
</tr>
</tbody>
</table>

a. Dependent Variable: IRA

**Impact of Demographic factors on Job Stress**

A multiple regression analysis was conducted to examine the influence of demographic
factors on job stress. The summary of the results are shown in Table 12 below. The linear
combination of demographic factors was significantly related to job stress, $R^2 = .239$, adjusted $r^2
= .153; F (13, 115) = 2.781, p < .001$. The result of this analysis indicated that as the number of
hours nursing faculty worked increased, job stress increased. In fact, for each additional hour
worked, job stress increased by .217. This means that the more hours nurse faculty worked, the
more job stress they experienced. Likewise, the higher the level of education, the more job stress
was experienced. For each additional unit of increase in formal level of education, the job stress level increased by .159 unit.
Table 12.

Regression analysis of demographic factors on ERI

<table>
<thead>
<tr>
<th>Variables</th>
<th>$b$</th>
<th>$SE$</th>
<th>$B$</th>
<th>$t$</th>
<th>$p$ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>.833</td>
<td>.495</td>
<td>1.683</td>
<td>.095</td>
<td></td>
</tr>
<tr>
<td>What is your highest level of formal education?</td>
<td>.159</td>
<td>.049</td>
<td>.289</td>
<td>3.251</td>
<td>.002</td>
</tr>
<tr>
<td>What is your academic rank?</td>
<td>.060</td>
<td>.046</td>
<td>.142</td>
<td>1.318</td>
<td>.190</td>
</tr>
<tr>
<td>What is your area of specialization?</td>
<td>-.009</td>
<td>.021</td>
<td>-.040</td>
<td>-.442</td>
<td>.659</td>
</tr>
<tr>
<td>Faculty age</td>
<td>-.024</td>
<td>.063</td>
<td>-.042</td>
<td>-.376</td>
<td>.708</td>
</tr>
<tr>
<td>Salary</td>
<td>-.061</td>
<td>.046</td>
<td>-.123</td>
<td>-1.323</td>
<td>.188</td>
</tr>
<tr>
<td>Number of students taught per year</td>
<td>-.023</td>
<td>.056</td>
<td>-.034</td>
<td>-.411</td>
<td>.682</td>
</tr>
<tr>
<td>Number of children (under 18 years of age living at home)</td>
<td>-.094</td>
<td>.063</td>
<td>-.150</td>
<td>-1.500</td>
<td>.136</td>
</tr>
<tr>
<td>Faculty union</td>
<td>-.089</td>
<td>.097</td>
<td>-.079</td>
<td>-.915</td>
<td>.362</td>
</tr>
<tr>
<td>Hours worked</td>
<td>.217</td>
<td>.061</td>
<td>.303</td>
<td>3.539</td>
<td>.001</td>
</tr>
<tr>
<td>Years as Faculty</td>
<td>.018</td>
<td>.056</td>
<td>.035</td>
<td>.319</td>
<td>.750</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>.107</td>
<td>.146</td>
<td>.062</td>
<td>.733</td>
<td>.465</td>
</tr>
<tr>
<td>Second job</td>
<td>-.077</td>
<td>.119</td>
<td>-.074</td>
<td>-.650</td>
<td>.517</td>
</tr>
<tr>
<td>Number of hours worked on second job</td>
<td>-9.998E-005</td>
<td>.003</td>
<td>-.004</td>
<td>-.036</td>
<td>.971</td>
</tr>
</tbody>
</table>

SE=standard error

$R^2 = .239$, adjusted $r^2 = .153$; F (13, 115) = 2.781, $p < .002$

Among demographic factors, the regression results indicated that salaries, number of students taught, second job, and hours worked on second job did not predict job stress.
Similarly, number of years worked as faculty, faculty union or non union membership did not predict job stress, nor did number of dependent children.

**Impact of Facets of JDI and Overcommitment on Job Stress**

In this section, the impact of facets of JDI and overcommitment on job stress were examined. A multiple regression analysis was conducted to evaluate how the five facets of JDI, JIG and overcommitment influenced job stress. The predictors were the five facets of JDI, JIG and overcommitment while the criterion was job stress. The linear combination of overcommitment, JIG and facets of JDI was significantly related to ERI, $R^2 = .607$, adjusted $r^2=.598$; $F (7, 318) = 70.127$, $p< .001$. The sample correlation was .78, meaning there is a strong positive correlation between job stress, job satisfaction and JDI facets and overcommitment. The variation in job stress explained by the predictor variable was 60.7%. This means the predictor variables explained 61% of the variation in job stress. Table 13 below illustrates the relative strengths of the individual predictor variables. Findings showed job satisfaction, supervision, and promotion negatively influenced job stress. As satisfaction with the job, supervision, and promotion increased, job stress decreased. Overcommitment positively influenced job stress, indicating as faculty became overcommitted to their work, job stress increased. Satisfaction with pay did not influence in job stress.
Table 13.

Regression analysis of JDI facets and Overcommitment on Job Stress

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>SE</th>
<th>B</th>
<th>t</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>1.695</td>
<td>.106</td>
<td>16.009</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Overcommitment</td>
<td>.023</td>
<td>.004</td>
<td>.204</td>
<td>5.479</td>
<td>.000</td>
</tr>
<tr>
<td>JIG</td>
<td>-.016</td>
<td>.002</td>
<td>-.428</td>
<td>-7.677</td>
<td>.000</td>
</tr>
<tr>
<td>Coworkers</td>
<td>-.003</td>
<td>.002</td>
<td>-.101</td>
<td>-2.114</td>
<td>.035</td>
</tr>
<tr>
<td>Supervision</td>
<td>-.007</td>
<td>.001</td>
<td>-.266</td>
<td>-5.803</td>
<td>.000</td>
</tr>
<tr>
<td>Promotion</td>
<td>-.003</td>
<td>.001</td>
<td>-.145</td>
<td>-3.488</td>
<td>.001</td>
</tr>
<tr>
<td>Pay</td>
<td>-.001</td>
<td>.001</td>
<td>-.046</td>
<td>-1.247</td>
<td>.213</td>
</tr>
</tbody>
</table>

SE=standard error

$R^2 = .607$, adjusted $r^2 = .598$; $F(7, 318) = 70.127$, $p < .001$

a. Dependent Variable: ERI
Table 14.

**Multiple Regression Analysis of demographic data on JIG**

<table>
<thead>
<tr>
<th>Variable</th>
<th>$b$</th>
<th>SE</th>
<th>$B$</th>
<th>$t$</th>
<th>$P$ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>58.431</td>
<td>13.344</td>
<td>4.379</td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>Highest formal education</td>
<td>-2.181</td>
<td>1.339</td>
<td>-.153</td>
<td>-1.628</td>
<td>.106</td>
</tr>
<tr>
<td>Academic rank</td>
<td>-2.438</td>
<td>1.230</td>
<td>-.222</td>
<td>-1.982</td>
<td>.050</td>
</tr>
<tr>
<td>Area of specialization</td>
<td>.165</td>
<td>.575</td>
<td>.027</td>
<td>.288</td>
<td>.774</td>
</tr>
<tr>
<td>Faculty age</td>
<td>1.397</td>
<td>1.711</td>
<td>.094</td>
<td>.816</td>
<td>.416</td>
</tr>
<tr>
<td>Salary</td>
<td>-.301</td>
<td>1.262</td>
<td>-.024</td>
<td>-.239</td>
<td>.812</td>
</tr>
<tr>
<td>Students taught per year</td>
<td>-.103</td>
<td>1.496</td>
<td>-.006</td>
<td>-.069</td>
<td>.945</td>
</tr>
<tr>
<td>Children under 18 year</td>
<td>.696</td>
<td>1.698</td>
<td>.043</td>
<td>.410</td>
<td>.683</td>
</tr>
<tr>
<td>School unionized</td>
<td>4.232</td>
<td>2.611</td>
<td>.146</td>
<td>1.621</td>
<td>.108</td>
</tr>
<tr>
<td>Hours worked as faculty</td>
<td>-6.290</td>
<td>1.694</td>
<td>-.336</td>
<td>-3.713</td>
<td>.000</td>
</tr>
<tr>
<td>Years as Faculty</td>
<td>-1.987</td>
<td>1.497</td>
<td>-.150</td>
<td>-1.327</td>
<td>.187</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>.314</td>
<td>4.049</td>
<td>.007</td>
<td>.078</td>
<td>.938</td>
</tr>
<tr>
<td>Second job</td>
<td>-3.013</td>
<td>3.889</td>
<td>-.111</td>
<td>-.775</td>
<td>.440</td>
</tr>
<tr>
<td>Number of hours worked per week</td>
<td>-.267</td>
<td>.224</td>
<td>-.430</td>
<td>-1.191</td>
<td>.236</td>
</tr>
</tbody>
</table>

$SE=$ standard error

$R^2 = .195$; adjusted

$R^2=.095$ $F(14,113)=1.593$;

$p<.028$

a. Dependent Variable: JIG

In this section of the research, the researcher tried to answer the question: "what demographic factors influenced job satisfaction among nurse faculty with RFDD who teach in nursing programs the baccalaureate level or higher?" The results are shown in Table 14 above. A multiple regression analysis was conducted to test if the demographic factors used in the study
predicted overall job satisfaction. The model was statistically significant, $R^2 = .195$; adjusted, $r^2 = .095$, $F (14, 113) = 1.593$; $p = <.028$, the sample correlation coefficient was .441, and all fifteen demographic factors accounted for approximately 20% of the variance in job satisfaction ($R^2 = .195$, Adjusted $R^2 = .095$).

Table 14 illustrates the relative strength of the individual predictors. All bivariate correlations for academic rank, hours worked per week, and years as faculty were negative. The regression analysis of job satisfaction on demographic factors revealed that the only variables that were significant predictors of job satisfaction were hours worked per week by faculty and academic rank. The analysis showed for each one additional hour worked, job satisfaction decreased by 6.290 units. This means the more hours worked by faculty, the less satisfied they were with the job. In addition, for each unit increase in academic rank, job satisfaction decreased by 2.438 units.
Table 15

**Impact of ERI, ERI subscales and Five JDI facets on JIG**

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>SE</th>
<th>Beta</th>
<th>t</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>33.655</td>
<td>5.137</td>
<td>.655</td>
<td>6.551</td>
<td>.000</td>
</tr>
<tr>
<td>ERI</td>
<td>-14.846</td>
<td>2.454</td>
<td>.555</td>
<td>-6.050</td>
<td>.000</td>
</tr>
<tr>
<td>IRA</td>
<td>1.198</td>
<td>.478</td>
<td>.085</td>
<td>2.504</td>
<td>.013</td>
</tr>
<tr>
<td>Effort</td>
<td>.583</td>
<td>.210</td>
<td>.170</td>
<td>2.779</td>
<td>.006</td>
</tr>
<tr>
<td>Reward</td>
<td>-.187</td>
<td>.162</td>
<td>-.096</td>
<td>-1.154</td>
<td>.249</td>
</tr>
<tr>
<td>Overcommitment</td>
<td>-.248</td>
<td>.120</td>
<td>-.083</td>
<td>-2.078</td>
<td>.039</td>
</tr>
<tr>
<td>Coworkers</td>
<td>.137</td>
<td>.041</td>
<td>.148</td>
<td>3.363</td>
<td>.001</td>
</tr>
<tr>
<td>Present Job</td>
<td>.348</td>
<td>.044</td>
<td>.342</td>
<td>7.946</td>
<td>.000</td>
</tr>
<tr>
<td>Supervision</td>
<td>.076</td>
<td>.033</td>
<td>.107</td>
<td>2.304</td>
<td>.022</td>
</tr>
<tr>
<td>Promotion</td>
<td>.002</td>
<td>.027</td>
<td>.003</td>
<td>.063</td>
<td>.949</td>
</tr>
<tr>
<td>Pay</td>
<td>.007</td>
<td>.013</td>
<td>.018</td>
<td>.516</td>
<td>.606</td>
</tr>
</tbody>
</table>

$SE=$standard error

$R^2 = .669$, adjusted $r^2 = .658$; $F (10, 303) = 61.259$, $p < .01$

Table 15 is a summary of the results of the multiple regression analysis conducted to test if job stress, effort, reward, overcommitment, IRA, and five facets of the Job Descriptive Index on overall job satisfaction. The result showed that: coworkers, present job, supervision, promotion, and pay, significantly influenced participant’s ratings of job satisfaction. The results of the regression indicated the predictors explained 66.9% of the variance in job satisfaction, indicating that approximately 66.9% of variance in job satisfaction were
accounted for by the linear combination of the predictor variables, $R^2 = .669$, adjusted $r^2 = .658$; $F(10, 303) = 61.259$, $p < .001$. It was found that job stress significantly predicted job satisfaction ($= -14.846$, $p < .001$), as did intent to remain in academia ($= 1.198$, $p < .001$), effort ($= .583$, $p < .01$), present job ($= .348$, $p < .001$) and satisfaction with coworkers ($= .137$, $p < .001$).

**Summary**

This study examined the impact of nurse faculty job stress on job satisfaction and intent to remain in academia among nurse faculty who teach at the baccalaureate level or higher in nursing programs across the United States of America. Two established instruments, Effort-Reward Imbalance and the Job in General/Job Descriptive Index questionnaires were used for data collection. Findings show reliability of the ERI questionnaire and JIG/JDI instruments to be adequate. Cronbach’s alpha for the ERI and JDI/JIG questionnaires shows acceptable internal consistency with the instrument as a whole. The ERI instrument had a Cronbach’s alpha of .717 and the JDI questionnaire resulted in an overall Cronbach’s alpha of .954. Analysis of the internal consistency of subscales for both the ERI and JIG/JDI instruments and subscales were acceptable and are shown in Table 1.

Forty-seven percent (N=168) of faculty reported job stress in the faculty role, 81% (N=275) intended to remain in academia. Nurse faculty reported high job satisfaction and intent to remain in academia. Contrary nurse faculty reported job stress, many faculty members were satisfied with the job overall. Most facets of the JDI were also rated high. Job satisfaction was negatively correlated with satisfaction with coworkers, present job, supervision, promotion, and pay. This means that as job stress increases, satisfaction with
coworkers, present job, supervision, promotion, and pay decrease. Schools that employ nurse faculty should put strategies in place to reduce stress by creating a balance between effort and reward.
CHAPTER 5: DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

The shortage of nursing faculty, specifically those with research focused doctoral degrees is well documented in current literature (Bartfay & Howse, 2007; HRSA, 2010; Nickitas & Feeg, 2011). Nurse faculty with RFDD are charged with the education of nurses at all academic levels, yet there are no documented studies that have examined their job stress, job satisfaction and intent to remain in academia. Therefore, the purpose of this cross sectional quantitative predictive research study was to examine the influence of job stress on job satisfaction and intent to remain in academia among nurse faculty with research focused doctoral degrees.

This study provides an important finding in relation to the ERI theoretical model, which postulates that an imbalance between effort and reward could result in stress which could negatively influence employees physiologically and psychologically (Enberg, Sundelin, & Öhman, 2013; Siegrist, 1996; Siegrist, Lunau, Wahrendorf, & Dragano, 2012). Findings showed that job stress negatively influenced nursing faculty job satisfaction and intent to remain in academia as postulated by the ERI theoretical model. Knowledge of such findings could be used to address the current nursing faculty effort-reward imbalance and plan strategies to alleviate the faculty shortage.

The next section begins with a brief summary of study findings, and then presents discussion in relation to existing literature. Implications of faculty job stress and recommendations for further research are included.
Summary of Findings

This research is the first documented study conducted with nurse faculty with RFDD using the effort-reward imbalance theoretical model to examine the influence of nurse faculty job stress on job satisfaction and intent to remain in academia.

Two established instruments, Effort-Reward Imbalance and Job Descriptive Index/Job in General questionnaire were used for data collection. Findings showed acceptable reliability of the ERI questionnaire and JDI instruments. Cronbach’s alpha for the ERI and JDI/JIG questionnaires also had an acceptable internal consistency with the instruments as a whole. The ERI instrument had an a Cronbach’s alpha of .717 and JDI questionnaire resulted with an overall Cronbach’s alpha of .954. Analysis of internal consistency of subscales for both ERI and JDI instruments and subscales were acceptable and are shown in Table 1. The three main study findings are:

- Job stress had a negative correlation to job satisfaction and intent to remain in academia while job satisfaction had a positive correlation with intent to remain in academia (Aim 1).

There was a moderate-to-strong negative correlation between job stress and job satisfaction, \( r (347) = -.674, \ p < .00 \). This means as faculty experienced more stress on the job, the less satisfied they were with the job. Again, there was a weak negative correlation between job stress and IRA, \( r (339) = -.092, \ p < .01 \). This means as faculty experienced more stress on the job, the less likely they were to remain in academia. The findings also showed a positive correlation between job satisfaction and IRA, \( r (339) = .207, \ p < .001 \). This means as faculty experienced more job satisfaction, they stayed on the job longer. To summarize the findings,
results of the study show that job stress negatively correlates to job satisfaction and intent to remain in academia. However, satisfaction with job in general positively correlates to intent to remain in academia.

- Job stress had a negative influence on job satisfaction but did not significantly influence intent to remain in academia (Aim 2).

Job stress inversely influenced job satisfaction, (beta = -.026, p < .001), meaning as job satisfaction increased, job stress decreased by .026 units. Additional findings showed that job stress was not a significant predictor of intent to remain in academia. This means job stress was irrelevant when it came to faculty intent to remain or not remain in academia among participants. The implication is that even if faculty experienced job stress, it did not influence their intent to remain in academia, thus other variables may mediate job stress making it possible for faculty to remain on the job. The large number of faculty (81%) who intend to remain in academia will do so despite job stress, but also because 92% (n=326) are satisfied with the job.

- Job satisfaction mediated the relationship between job stress and intent to remain in academia (Aim 3).

This study tested the applicability of the ERI model to effectively explain the nature of the relationships among job stress, job satisfaction and intent to remain in academia among RFDD prepared nursing faculty teaching at the baccalaureate level or higher. Specifically, the study determined how the perceptions of an imbalance between nursing faculty effort at work and reward influenced their job satisfaction and intent to remain in academia. Findings showed that regression model 2 in Table 10 was a good fit for the data and that ERI as an independent
variable along with JIG as a mediating variable, significantly predict IRA (F(2, 334) = 9.65, p = .000) at 0.05 significance level. It can be noted that there was a substantial decrease in p-value from model 1 to model 2 indicating there was a mediating effect on the relationship between IRA and job stress via job satisfaction. This supports the correlational summary in Table 4. The following section is a discussion of findings in relation to the existing literature. Implications and recommendations as a result of findings from the study are discussed.

Discussion of Findings

The present study is the first to specifically examine the interaction between job stress, job satisfaction, and the intent to remain in academia among nurse faculty with research focused doctoral degrees. This study is also the first to use the effort-reward imbalance model to examine nurse faculty job stress. Findings from this study extend and help interpret prior research. Job stress negatively correlated to job satisfaction and intent to remain in academia. Although there are no documented studies in the literature that focus on job stress among nurse faculty with research focused doctoral degrees, there is substantial literature indicating that job stress affects faculty job satisfaction and the intent to remain in academia (Al-Omari et al., 2008; Guglielmi & Tatrow, 1998; Kyriacou, 2001).

The findings from this study also support Siegrist’s (2001) suggestion that approximately 10% to 40% of workers experience some effort-reward imbalance on the job. The findings of this study revealed that 47% (n=168) of the respondents experienced effort reward imbalance on the job, indicating that many nursing faculty members experienced stress at work. The key assumption of the ERI model is that an imbalance between effort and reward produces job stress and subsequent negative health effects (Ganster & Perrewé, 2011). This
study supports the ERI theoretical model by demonstrating that if nurse faculty members experience excessive job stress, they will not be satisfied with their jobs and will not intend to remain in academia.

Findings also are consistent to those by Ahsan (2009) who found a significant negative relationship between job stress and job satisfaction among academic faculty from several disciplines.

The high percentage of reported job stress among study participants could be explained by the numerous expectations that come with the nursing academic faculty role. The existing literature revealed that faculty members are generally stressed by heavy workloads, insufficient resources, time constraints, and non-competitive salaries (Adriaenssens, Prins, & Vloeberghs, 2006; Bartfay & Howse, 2007; Evans, 2013; Leonard et al., 2008; Moulton & Wakefield, 2007).

The findings from this research provide an extension to the findings from the study by Thorsen (1996), who concluded that it is the quantity, or workload, rather than the nature of academic work itself that was found to be stressful. The number of hours spent on the job and on tasks which had time constraints also were found to be significant sources of stress (Thorsen, 1996). The findings from this study revealed that, not just the quantity of workload affected nurse faculty job stress but rather, the imbalance between effort and reward resulted in job stress. The current findings also support Candela and colleagues (Candela et al., 2013), who showed that faculty perceptions of academic workload were significant factors in regards to intent to quit or stay in academia.

An overwhelming majority, 92% (n =326) of study participants reported job satisfaction
and intent to remain in academia. These findings are consistent with those reported by other studies (Biddle, 2011; Bittner and O'Connor, 2012; Lane, Esser, Holte, & McCusker, 2010). A similar finding by McKeachie (1997) revealed that college faculty are highly motivated by a professional calling. However, one study reported that only perceived stress was found to explain predictive variance, with high levels of job stress related to low levels of job satisfaction (Reilly, Dhingra, & Boduszek, 2014). The implications from findings of this study suggest perceived job stress should be targeted in efforts to improve teachers’ job satisfaction (Reilly, Dhingra, & Boduszek, 2014). For this reason, extrinsic motivators (such as pay, benefits, and pension) are found to be less important to their job satisfaction than might be the case with other professional occupations. In addition, nursing faculty stayed in academia due to the respect it afforded them, the chance it gave them to shape future nursing practice, and the sense of community they found with their colleagues (Berent & Anderko, 2011; Waltman, Bergom, Hollenshead, Miller, & August, 2012).

Job satisfaction positively correlated with intent to remain in academia, reward, coworkers, present job, supervision, promotion, and pay. This indicates that as faculty perceived their job with satisfaction, they also perceived reward, coworkers, present job, supervision, promotion, pay, and retention with satisfaction, suggesting that efforts should be made to promote job satisfaction. Job satisfaction negatively correlated with effort and overcommitment. This means that as faculty exert higher levels of effort and become overcommitted, they become less satisfied with the job.

Gui, Barriball, and While, (2009a) also conducted an integrative literature review on nurse faculty job satisfaction and found the reported studies differed regarding levels of job
satisfaction among nurse faculty without a consistent pattern. The literature review also revealed that the variables of job satisfaction, which include satisfaction with coworkers, supervision, pay, opportunities for promotion, present job and global job satisfaction remained consistently the same across countries and institutions and over time (Gui, Barriball, & While, 2009a).

Gui and Barriball (2011), in a similar study using JDI in mainland China, revealed that faculty members were dissatisfied with their pay and with their opportunities for promotion. Similar findings were reported by McCracken (2001). However, in a more recent study by Gui, Gu, Barriball, While, and Chen (2014), the authors found nurse faculty members in mainland China and United Kingdom were satisfied with their jobs overall, but reported low levels of satisfaction with promotion and not pay.

Many studies on pay and promotion opportunities for nursing faculty have revealed that their rewards need to be improved. In light of the present nursing faculty shortage, there also need to be more studies examining nurse faculty job satisfaction. If job satisfaction is low in an organization, interventions can be made to improve the quality of employees’ work lives (Rosser, 2004). In this way, negative influences in the workplace, such as high turnover rates and job stress, could be avoided (Van Saane, Sluiter, Verbeek, & Frings-Dresen, 2003).

According to Bozeman (2011), in some cases, job satisfaction theorists focus predominantly on intrinsic motivation and satisfaction. This is especially the case for fields where workers have made career choices that obviously do not maximize their direct economic self-interest (Bozeman, 2011). An interesting finding from this study showed that there was no relation between intent to remain in academia and pay. Having said this, all effort
should be made to promote a balance between effort and reward, taking into account faculty work load and reward to decrease job stress, which is higher than predicted for employees in general (Siegrist, 2001).

One of the strongest motivators to teach is that teaching provides an opportunity to influence student success and shape the next generation of nurses. As an educator, one can model professional values and skills, and ultimately influence the quality of care provided by future nurses (Penn, Wilson, & Rosseter, 2008). A faculty member who experiences job stress may not be able to model professional values and skills necessary to influence the quality and safety of care by the future nurses she taught if under stress on the job.

Several studies have also shown satisfaction affects nursing faculty members’ intent to remain in academia (Garbee & Killacky, 2008; Ruel, 2009; Sullivan, 2001). In the current study, participants scored highly for job satisfaction and intent to remain in academia. These findings support research reported by Biddle (2011), who found job satisfaction was an important predictor of intention to stay in academia. Berent and Anderko (2011) came to a similar conclusion, asserting that faculty members remained in academia out of enjoyment and for the opportunity to mentor others. Although similar findings were reported by Garbee and Killacky (2008), Bittner and O’Connor (2012) found instead that 19% percent of faculty reported that they were likely to leave within one year, and 52% were likely to leave within five years. Gibson (2012) found that the key predictors of whether faculty members had considered leaving academe altogether were a perceived lack of support, a perceived lack of fit, and dissatisfaction with aspects of the job.

There were no findings in the existing literature that discussed job satisfaction as a
mediator of the relationship regarding job stress and intent to remain in academia. From this study, a large number of nurse faculty report job stress, yet the majority are satisfied and intend to remain in academia. An explanation for nurse faculty remaining in academia is provided by Al-Hussami, Saleh, Abdalkadar, and Mahadeen (2011), who suggested that faculty choose to remain in academia because the cost of leaving is too high, even if they do experience stress on the job. In addition, study participants scored highly on satisfaction with coworkers (Al-Hussami et al, 2011). It has been reported that positive interactions with superiors, peers, and subordinates have been found to mediate perceived workplace stress (Chiaburu & Harrison, 2008), which may have occurred with this sample of nursing faculty.

**Policy Implications for these Results**

The recent IOM (2010) report calls for an overhaul of the nursing education system to help improve the health of the nation. Overhauling the nursing education system requires more qualified nursing faculty and nurses who are willing to join academia. A first step will be to encourage more nurses to gain research focused doctoral degrees. As this study suggests, the study participants, who all have doctoral degrees, reported being stressed yet satisfied with the job and reported intent to remain in academia. Specifically, Chinweuba (2007) concluded that the higher their levels of education, the more stress nursing faculty members experienced on the job, yet faculty members reported being satisfied with their work.

Findings from this study support ERI model in that nurse faculty job stress negatively impact job satisfaction and intent to remain in academia. As such, a first step in developing solutions to the present nursing faculty shortage is gaining an increased understanding of variables that influence job stress among nursing faculty with RFDD. Knowledge of nurse
faculty effort-reward imbalance on the job could be used to plan strategies to create a balance between effort and reward thereby reducing job stress. Nursing faculty members believe their effort at work is not reciprocated in the rewards they receive, as shown by their high scores on effort and low scores on reward, pay and opportunities for promotion.

It is possible, given the high level of education among the study’s participants, that too much is expected of them in their work, and that this contributes to their stress levels. It is also possible that participants’ perceptions of their own work efforts are not equal to the rewards they expect to receive for them, and that this results in stress, as suggested by the model.

To decrease faculty job stress, strategies that focus on decreased workload, improved reward or both should be implemented by universities and schools of nursing to reduce job stress among nurse faculty. The correlational analysis showed that as reward increased, job stress decreased, r (356) = -.802, p < .001. This indicates there is need to increase nurse faculty reward by reviewing current faculty reward system in terms of pay and promotion. The key to reducing nurse faculty stress is making pay commensurate with workload and comparable to faculty pay across departments within an institution. According to Lyons and Akroyd, (2014), faculty wish to be equitably rewarded as they strive to facilitate student learning.

The amount of effort expected of faculty members needs to be reduced and the rewards increased to promote eustress. However, Siegrist (2005) explains that effort-reward imbalance results from poorly-defined contracts, limited choices of work, and lack of mobility which unfortunately could apply to the study population. It is also possible that employees may accept such imbalances for strategic reasons, for example in anticipation of better work prospects in the future (Siegrist 2005). As a result, faculty contracts should be written in detail
with regards to what is expected from them in terms of workload and fair reward. In addition, effort should be made by university employers to ensure that faculty contracts are equitable.

Nursing schools also have to make concerted efforts to decrease faculty workload. According to Ellis (2013), increases in faculty workload results in difficulties with work-life balance and dissatisfaction which could result in nursing education becoming less attractive to young faculty. Inadequate salaries result in stress and dissatisfaction among nursing faculty (Adriaenssens, Prins, & Vloeberghs, 2006; Carlson, 2009; Roughton, 2013). The imbalance between effort and reward leads to nurse faculty job stress.

The current shortage of nursing faculty and the aging professoriate makes it imperative to recruit the next generation of faculty. One step toward ending the present shortage would be to determine how to decrease job stress among current faculty members. According to Salopek (2005), nearly half of all large companies provide some kind of stress-management training to their employees. Such programs are beneficial in the short term, but do not address the root causes of job stress. The present suggestion marks a shift away from the use of stress-management techniques, such as yoga, to relieve individual stress, and toward the creation of a balance between effort and reward in order to reduce the stress the job produces.

Since theory-based interventions depend largely on organizational changes that individual employees cannot bring about, it is necessary for employers to change their practices (Akizumi & Norito, 2004). Roughton (2013) suggests schools and colleges of nursing offer higher salaries and benefits comparable to non-nursing faculty whose salaries reflect market pay indicators. Universities that employ nursing faculty should analyze their workloads and reward systems. Strategies should focus on decreasing workloads and on
improving pay and opportunities for promotion. Faculty members reported low satisfaction with their pay and their opportunities for promotion, and one way to lower stress is to raise salaries, in comensuration to workload and increase opportunities for promotion.

The findings also suggest that study participants experience effort-reward imbalance which negatively influence their job satisfaction and intent to remain in academia, yet majority of faculty derive job satisfaction and intend to remain in academia. These findings support the ERI theoretical model which purports job stress results in negative outcomes. Specifically, attention should be paid to faculty workload, pay, and promotional opportunities, as these are the areas in which faculty reported the least satisfaction.

**Recommendations for Future Research**

From the findings of the study, the following recommendations are suggested for further research:

- Investigate the reasons why faculty are stressed on the job, yet satisfied to remain in academia. There may be confounding variables that were not examined, yet contributed to nurse faculty job stress, job satisfaction and intent to remain in academia.

- Conduct a study that extends the same objectives to all nursing faculty who teach at the baccalaureate level and higher in the United States, including those who have master’s degrees. This will enable a comparative analysis to reveal similarities and differences among groups. Findings could be used to plan strategies to alleviate nurse faculty job stress and encourage the next generation of nursing faculty.

- Conduct a similar study using random sampling to enable generalization of findings.
• Conduct a comparative study of this nature across disciplines in the universities to examine the level of faculty effort-reward imbalance, job satisfaction and intent to remain in academia and compare stress levels among faculty across disciplines. Findings from such a comparative study could be used to plan strategies to reduce faculty job stress, specifically nurse faculty job stress.

• Use a mixed method approach to support quantitative findings of a similar study that investigates nurse faculty job stress, job satisfaction and intent to remain in academia to add meaning to findings.

• Develop a valid and reliable instrument to investigate nurse faculty job stress in detail. There are no instruments that specifically measure nurse faculty job stress which could be multifaceted and different from the ERI instrument.
References


Comparison between the sexes. *Annals of Behavioral Medicine, 4*, 197-204.


McCracken, C. G. (2001). *Relationship between stress levels and job satisfaction among community college faculty in East Tennessee.* East Tennessee State University, Johnson City, TN.


Appendices

Appendix A

Survey Questionnaires
Demographic Data
1. Please indicate your gender
   Male
   Female
2. Please select category that includes your age
   18-24
   25-34
   35-44
   45-54
   55-64
   65 or older
3. How many children live in your household?
   0
   1
   2
   3
   4 or more
4. Do you have children in your home who are under the age of 18 years?
   Yes
   No
5. Do you have other individuals in your home over the age of 18 for whom you are responsible?
   Yes
   No
6. What is your highest level of formal education?
Research focused Doctorate degree in nursing
Non-Research focused Doctorate degree in nursing
Doctorate in other field

7. What is your area of specialization?
   
   Clinical specialist
   Nurse practitioner
   Nurse Anesthetist
   Nurse midwife
   Other

8. Which of the following ranges includes the yearly income earned from your nursing education position before taxes?
   
   Less than $20,000
   $20,000-$29,000
   $30,000-$39,000
   $40,000-$49,000
   $50,000-$59,000
   $60,000-$69,000
   $70,000-$79,000
   $80,000-$89,000
   $90,000-$99,000
9. Do you have another job that supplements the salary from your nursing education position?
   Yes
   No

10. If yes, how many hours per week do you work at your other job?

11. Which one of the following best describes you?
    White/Caucasian
    Spanish/Hispanic/Latino
    Black/African American
    Asian
    Pacific Islander
    Native American
    Other
    Prefer not to answer

12. What is your state of residence?

13. Is your school of nursing unionized?

   Thank You for your answers
The following items refer to your present occupation. For each of the following statements, please indicate to what degree it reflects your situation.

ERI1 I have constant time pressure due to a heavy work load.
Strongly Disagree.................................. □ (1)
Disagree........................................ □ (2)
Agree............................................. □ (3)
Strongly Agree.................................. □ (4)

ERI2 I have many interruptions and disturbances while performing my job.
Strongly Disagree.................................. □ (1)
Disagree........................................ □ (2)
Agree............................................. □ (3)
Strongly Agree.................................. □ (4)

ERI3 I have a lot of responsibility in my job.
Strongly Disagree.................................. □ (1)
Disagree........................................ □ (2)
Agree............................................. □ (3)
Strongly Agree.................................. □ (4)
ERI4 I am often pressured to work overtime.

Strongly Disagree.......................................... □ (1)
Disagree............................................. □ (2)
Agree...................................................... □ (3)
Strongly Agree........................................... □ (4)

ERI5 My job is physically demanding.

Strongly Disagree.......................................... □ (1)
Disagree............................................. □ (2)
Agree...................................................... □ (3)
Strongly Agree........................................... □ (4)

ERI6 Over the past few years, my job has become more and more demanding.

Strongly Disagree.......................................... □ (1)
Disagree............................................. □ (2)
Agree...................................................... □ (3)
Strongly Agree........................................... □ (4)
ERI7 I receive the respect I deserve from my superiors or a respective relevant person.

Strongly Disagree.................................................. □ (1)
Disagree.............................................................. □ (2)
Agree................................................................. □ (3)
Strongly Agree....................................................... □ (4)

ERI 8 I experience adequate support in difficult situations.

Strongly Disagree.................................................. □ (1)
Disagree.............................................................. □ (2)
Agree................................................................. □ (3)
Strongly Agree....................................................... □ (4)

ERI9 I am treated unfairly at work.

Strongly Disagree.................................................. □ (1)
Disagree.............................................................. □ (2)
Agree................................................................. □ (3)
Strongly Agree....................................................... □ (4)

ERI10 My job promotion prospects are poor.

Strongly Disagree.................................................. □ (1)
Disagree.............................................................. □ (2)
Agree................................................................. □ (3)
ERI 11 I have experienced or I expect to experience an undesirable change in my work situation.

Strongly Agree ........................................... □ (4)

ERI 12 My employment security is poor.

Strongly Disagree ........................................... □ (1)

Disagree ...................................................... □ (2)

Agree .......................................................... □ (3)

Strongly Agree ........................................... □ (4)

ERI 13 My current occupational position adequately reflects my education and training.

Strongly Disagree ........................................... □ (1)

Disagree ...................................................... □ (2)

Agree .......................................................... □ (3)

Strongly Agree ........................................... □ (4)
ERI14 Considering all my efforts and achievements, I receive the respect and prestige I deserve at work.

Strongly Disagree.........................□ (1)
Disagree................................. □ (2)
Agree........................................ □ (3)
Strongly Agree............................ □ (4)

ERI15 Considering all my efforts and achievements, my job promotion prospects are adequate.

Strongly Disagree.............................□ (1)
Disagree........................................ □ (2)
Agree........................................... □ (3)
Strongly Agree.............................. □ (4)

ERI16 Considering all my efforts and achievements, my salary / income is adequate.

Strongly Disagree.............................□ (1)
Disagree........................................ □ (2)
Agree........................................... □ (3)
Strongly Agree.............................. □ (4)

Thank you for answering the questions
Please indicate to what extent you personally agree or disagree with these statements.

(1) Strongly
(2) Disagree
(3) Disagree Agree
(4) Strongly Agree

OC1 I get easily overwhelmed by time pressures at work.
☐ (1) ☐ (2) ☐ (3) ☐ (4)

OC2 As soon as I get up in the morning I start thinking about work problems.
☐ (1) ☐ (2) ☐ (3) ☐ (4)

OC3 When I get home, I can easily relax and 'switch off' work.'
☐ (1) ☐ (2) ☐ (3) ☐ (4)

OC4 People close to me say I sacrifice too much for my job.
☐ (1) ☐ (2) ☐ (3) ☐ (4)

OC5 Work rarely lets me go; it is still on my mind when I go to bed.
☐ (1) ☐ (2) ☐ (3) ☐ (4)

OC6 If I postpone something that I was supposed to do today I'll have trouble sleeping at night.
☐ (1) ☐ (2) ☐ (3) ☐ (4)

Thank you for answering all questions.
People on Your Present Job

Think of the majority of people with whom you work or meet in connection with your work. How well does each of the following words or phrases describe these people? In the blank beside each word or phrase below, write

Y for “Yes” if it describes the people with whom you work
N for “No” if it does not describe them
? for “?” if you cannot decide

__ Stimulating
__ Boring
__ Slow
__ Helpful
__ Stupid
__ Responsible
__ Likeable
__ Intelligent
__ Easy to make enemies
__ Rude
__ Smart
Job in General

Think of your job in general. All in all, what is it like most of the time? In the blank beside each word or phrase below, write

Y for “Yes” if it describes your job

N for “No” if it does not describe it

? for “?” if you cannot decide

__ Pleasant
__ Bad
__ Great
__ Waste of time
__ Good
__ Undesirable
__ Worthwhile
Work on Present Job

Think of the work you do at present. How well does each of the following words or phrase describe your work? In the blank beside each word or phrase below, write

Y for “Yes” if it describes your work

N for “No” if it does not describe it

? for “?” if you cannot decide

__ Fascinating
__ Routine
__ Satisfying
__ Boring
__ Good
__ Gives sense of accomplishment
__ Respected
__ Exciting
__ Rewarding
__ Useful
__ Challenging
__ Simple
__ Repetitive
__ Creative
__ Dull
__ Uninteresting
__ Can see results
__ Uses my abilities

**Pay**

Think of the pay you get now. How well does each of the following words or phrases describe your present pay? In the blank beside each word or phrase below, write

Y for “Yes” if it describes your pay

N for “No” if it does not describe it
? for “?” if you cannot decide

__ Income adequate for normal expenses
__ Fair
__ Barely live on income
__ Bad
__ Comfortable
__ Less than I deserve
__ Well paid
__ Enough to live on
__ Underpaid

**Opportunities for Promotion**

Think of the opportunities for promotion that you have now. How well does each of the following words or phrases describe these? In the blank beside each word or phrase below, write

Y for “Yes” if it describes your opportunities for promotion

N for “No” if it does not describe them

? for “?” if you cannot decide

__ Good opportunities for promotion
__ Opportunities somewhat limited
Promotion on ability

Dead-end job

Good chance for promotion

Very limited

Infrequent promotions

Regular promotions

Fairly good chance for promotion

Supervision

Think of the kind of supervision that you get on your job. How well does each of the following words or phrases describe this? In the blank beside each word or phrase below, write

Y for “Yes” if it describes the supervision you get on the job

N for “No” if it does not describe it

? for “?” if you cannot decide

Supportive

Hard to please

Impolite

Praises good work

Tactful

Influential

Up-to-date
__ Unkind
__ Has favorites
__ Tells me where I stand
__ Annoying
__ Stubborn
__ Knows job well
__ Bad
__ Intelligent
__ Poor planner
__ Around when needed
__ Lazy
Appendix B

Personal communication with Professor Siegrist

Dear Professor Siegrist,

I am writing to enquire if you could give me permission to use the diagram of the ERI model in my research proposal and the study itself.

Thank you.

Sincerely,

Esther

Dear Esther Ampadu,

I hereby give you permission to use the figure of the ERI model. Moreover, you are free to use the ERI questionnaire for all research, teaching or intervention purposes as long as they are not linked to commercial purpose.

In case you need further information please consult the following website:

http://www.uniklinik-duesseldorf.de/med-soziologie

(Research on ERI)

With kind regards

Johannes Siegrist

________________________________________
Von: Esther Ampadu [ampadu.e@husky.neu.edu]


An: Siegrist, Prof. Dr.

Betreff: ERI model
Appendix C

NOTIFICATION OF IRB ACTION

Date: May 6, 2013
IRB #: 13-03-19

Principal Investigator(s): Michelle A. Beauchesne
Esther O. Ampadu

Department: School of Nursing
Bouvé College of Health Sciences

Address: 103 Robinson Hall
Northeastern University

Title of Project: Impact of Nurse Faculty Job Stress on Job Satisfaction and Intent to Remain in Academia

Participating Sites: N/A

DHHS Review Category: Expedited #7

Informed Consents: One (1) unsigned consent form as preface to online survey

Monitoring Interval: 12 months

APPROVAL EXPIRATION DATE: MAY 5, 2014

Investigator’s Responsibilities:

1. The informed consent form bearing the IRB approval stamp must be used when recruiting participants into the study.
2. The investigator must notify IRB immediately of unexpected adverse reactions, or new information that may alter our perception of the benefit-risk ratio.
3. Study procedures and files are subject to audit any time.
4. Any modifications of the protocol or the informed consent as the study progresses must be reviewed and approved by this committee prior to being instituted.
5. Continuing Review Approval for the proposal should be requested at least one month prior to the expiration date above.
6. This approval applies to the protection of human subjects only. It does not apply to any other university approvals that may be necessary.

C. Randall Colvin, Ph.D., Chair
Northeastern University Institutional Review Board

Nan C. Regina, Director
Human Subject Research Protection

Northeastern University FWA #4630
Dear Dean, Director, Chair, and Nursing Program Faculty:

My name is Esther Ampadu, an Assistant Professor at Labour College and Doctoral student, Northeastern University School of Nursing.

I am writing to invite you and your Research Doctorate (PhD, DNSc, DNS in nursing or other discipline) prepared faculty members to participate in a nationwide study of impact of nurse faculty job stress on job satisfaction and intent to remain in academia. Since the validity of the results of this study depends on obtaining a high rate of response, you and your faculty members’ participation is crucial to the success of this survey. The questionnaire may require 20 or more minutes to complete.

Upon receipt of this letter, please send the link below to all qualified faculty members and encourage their participation in this study.

Here is the link to the consent form and survey study:
https://www.surveymonkey.com/s/NurseFacultyStressSurvey

In a few days, you will be sent an email with the above link to be forwarded to all qualified faculty members inviting them to participate if this has not been already done.

A follow up email will be sent to you two weeks after the initial email to remind faculty members who have not had the opportunity to participate.

Please be assured that responses will be held in the strictest confidence. Individually identifying information will not be released to other researchers, to your institution, or to other organizations. You and your faculty members’ participation is strictly voluntary and participation (or non-participation) will have no impact on your job security.

This study has been reviewed and approved by the Northeastern University Institutional Review Board, ID # (13-03-19).

If you have any questions, mail me at ampadu.e@husky.neu.edu
Cell Phone # 617 435 4239

Sincerely,

Esther Ampadu MSN, R
1st Email ================

Dear Dean, Director, Chair, and Nursing Program Faculty:

My name is Esther Ampadu an Assistant Professor and Doctoral student at Northeastern University School of Nursing.

I hope you have received the letter inviting you and your faculty members to participate in the Nurse Faculty Job Stress and Satisfaction survey. This study is limited to faculty who are Research Doctorate (PhD, DNSc, DNS in nursing or other discipline) prepared faculty members.

Upon receipt of this email, please send the link below to all qualified faculty members and encourage their participation in this study.

Here is the link to the consent form and survey study:
https://www.surveymonkey.com/s/NurseFacultyStressSurvey

The validity of the results of this study depends on obtaining a high response rate. You and your faculty members’ participation are crucial to the success of this survey. The questionnaire may require 20 or more minutes to complete.

A follow up email will be sent to you two weeks after the initial email to remind faculty members who have not had the opportunity to participate.

Please be assured that responses will be held in the strictest confidence. Individually identifying information will not be released to other researchers, to your institution, or to other organizations. You and your faculty members’ participation is strictly voluntary and participation (or non-participation) will have no impact on your job security.

This study has been reviewed and approved by the Northeastern University Institutional Review Board, ID # (13-03-19).

If you have any questions, please do not hesitate to send an email.

Sincerely,

Esther Ampadu MSN, RN

Email: ampadu.e@husky.neu.edu

Cell Phone # 617 435 4239
Reminder email ==========

Dear Dean, Director, Chair, and Nursing Program Faculty:

My name is Esther Ampadu an Assistant Professor at Laboure College and Doctoral student, Northeastern University School of Nursing.

I am sending this email as a friendly reminder to you and your Research Doctorate (PhD, DNSc, DNS in nursing or other discipline) prepared faculty members to participate in a nationwide study of impact of nurse faculty job stress on job satisfaction and intent to remain in academia. Since the validity of the results of this study depends on obtaining a high rate of response, you and your faculty members' participation is crucial to the success of this survey. The questionnaire may require 20 or more minutes to complete.

Upon receipt of this email, please send the link below to all qualified faculty members as a reminder to encourage their participation in this study.

Here is the link to the consent form and survey study: https://www.surveymonkey.com/s/NurseFacultyStressSurvey

Please be assured that responses will be held in the strictest confidence. Individually identifying information will not be released to other researchers, to your institution, or to other organizations. You and your faculty members' participation is strictly voluntary and participation (or non-participation) will have no impact on your job security.

This study has been reviewed and approved by the Northeastern University Institutional Review Board, ID # (13-03-19).

If you have any questions, please do not hesitate to send an email.

Sincerely,

Esther Ampadu MSN, RN

Email: ampadu.e@husky.neu.edu

Cell Phone # 617 435 4239
Nurse Faculty Job Stress and Job Satisfaction Survey

Nurse Faculty Job Stress and Job Satisfaction Survey

Unsigned Consent Form

Northwestern University, Department of Nursing

Name of investigator(s): [Principal investigator's name, Michelle Beauchesne, DNSc, RN]
Student Researcher's name: Esther Ampadu, MSN, RN

Title of Project: Impact of Nurse Faculty Job Stress on Job Satisfaction and Intent to Remain in Academia

Request to participate in Research

We would like to invite you to participate in a web-based online survey. The survey is part of a research study whose purpose is to investigate the impact of nurse faculty job stress on job satisfaction and intent to remain in academia. This survey should take about 20 minutes to complete.

We are asking you to participate in this study because you are a nurse faculty member with research focused doctoral degree in nursing currently teaching at the baccalaureate level or higher. You must be at least 18 years old to take this survey.

The decision to participate in this research project is voluntary. You do not have to participate and you can refuse to answer any question. Even if you begin the web-based online survey, you can stop at any time.

There are no foreseeable risks or discomforts to you for taking part in this study.

There are no direct benefits to you from participating in this study. However, your responses may help us learn more about nurse faculty job stress, job satisfaction and intent to remain in academia.

Your part in this study is anonymous to the researcher(s). However, because of the nature of web-based surveys, it is possible that respondents could be identified by the IP address or other electronic record associated with the response. Neither the researcher nor anyone involved with this survey will be capturing those data. Any reports or publications based on this research will use only group data and will not identify you or any individual as being affiliated with this project.

If you have any questions regarding electronic privacy, please feel free to contact Mark Treadwell, Northwestern University Director of Information Security via phone at 617-373-7015, or via email at privacy@neu.edu.

If you have any questions about this study, please feel free to contact Esther Ampadu via email at empadu.e@husky.neu.edu, the person mainly responsible for the research.

You can also contact Michelle Beauchesne at M.beauchesne@neu.edu, the Principal Investigator.

If you have any questions regarding your rights as a research participant, please contact Nan C. Regins, Director, Human Subject Research Protection, 960 Renaissance Park, Northeastern University, Boston, MA 02115. Tel: 617.373.7575, Email: hrp@neu.edu. You may ask anonymously if you wish.

This study has been reviewed and approved by the Northeastern University Institutional Review Board, ID # (3-05-19).

By clicking on the accept button below you are indicating that you consent to participate in this study. Please print out a copy of this consent form for your records.

Thank you for your time.

Esther Ampadu, MSN, RN

1. By clicking on the button below, you consent to participate in this study. Thank you.

☐ Accept

https://www.surveymonkey.com/s/NurseFacultyStressSurvey

5/6/2013
Appendix D

Faculty Demographics

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<td>Do you have another job that supplements your nursing education job?</td>
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<thead>
<tr>
<th>Highest level of formal education</th>
<th>Frequency(N)</th>
<th>Percent</th>
<th>Cumulative percent</th>
</tr>
</thead>
</table>
### Research-focused doctoral degree in nursing

<table>
<thead>
<tr>
<th>Area of Specialization</th>
<th>Frequency(N)</th>
<th>Percent</th>
<th>Cumulative percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Nurse Specialist</td>
<td>67</td>
<td>19.5</td>
<td>19.5</td>
</tr>
<tr>
<td>Nurse Practitioner</td>
<td>72</td>
<td>21.0</td>
<td>40.5</td>
</tr>
<tr>
<td>Nurse Anesthetist</td>
<td>1</td>
<td>.3</td>
<td>40.8</td>
</tr>
<tr>
<td>Nurse Midwife</td>
<td>15</td>
<td>4.4</td>
<td>45.2</td>
</tr>
<tr>
<td>Administration</td>
<td>53</td>
<td>15.5</td>
<td>60.6</td>
</tr>
<tr>
<td>Other</td>
<td>135</td>
<td>39.4</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>343</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Do you plan to stay in academia for the next 5 years?

<table>
<thead>
<tr>
<th>Area of Specialization</th>
<th>Frequency(N)</th>
<th>Percent</th>
<th>Cumulative percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>281</td>
<td>81.4</td>
<td>81.4</td>
</tr>
<tr>
<td>No</td>
<td>64</td>
<td>18.6</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>345</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>