A STUDY OF FACTORS AFFECTING JOB SATISFACTION OF REGISTERED NURSES IN THE UNITED STATES

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A THESIS

Presented to

The Faculty of the Department of Economics and Business

The Colorado College

In Partial Fulfillment of the Requirements for the Degree

Bachelor of Arts

By

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May 2020

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Abstract

Over the past few decades, the United States has been suffering from a nursing shortage
and increasing job dissatisfaction and burnout of the healthcare workforce. This study
analyzes a series of personal and workplace variables of registered nurses versus job
satisfaction. The effect of these variables on job satisfaction is measured using survey
data from 2013, 2015, and 2016. Using an ordinary least squares (OLS) regression, it was
found that strain injuries, marital status, personal health status, and willingness to take the
same job again are strongly correlated to job satisfaction.

ON MY HONOR, I HAVE NEITHER GIVEN NOR RECEIVED
UNAUTHORIZED AID ON THIS THESIS

Melissa J LaFehr

Signature

Acknowledgements

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Introduction

The Bureau of Labor Statistics expects the registered nurse workforce in the United States to grow from 2.9 million in 2016 to 3.4 million in 2026 (US Bureau of Labor Statistics, 2019). Over 200,000 new registered nurses are needed each year through 2026 to fill newly created positions and to replace retiring nurses (US Bureau of Labor Statistics, 2018). In addition, Haddad and Toney-Butler (2019) state that the nursing profession continues to face shortages due to lack of potential educators, high turnover, and inequitable distribution of the workforce. To mitigate current and future nursing shortages, these issues as well as burnout of nursing professionals must be resolved.

Low levels of registered nurse job satisfaction may lead to burnout. Low job satisfaction and burnout are described as a complex phenomenon with multiple facets, for which nurses are at high risk. Common burnout symptoms include role ambiguity, workload, hardiness, active coping, and social support (Duquette, Kerouac, Sandhu, and Beaudet, 1994). Dawn Kettinger, spokeswoman for the Michigan Nurses Association, believes that burnout has worsened over the past few decades because the workload has greatly increased due to additional nursing responsibilities as well as more technology, documentation, electronic medical records (Ermak, 2014). The rise in the nursing shortage and the decline in job satisfaction of registered nurses has motivated economists and scholars to engage in research and analysis aimed at gaining a more comprehensive explanation for these worrying changes in the US healthcare system.

The average cost of turnover and reduced clinical hours attributable to burnout is estimated to be between $37,700 and $58,400 per nurse. In turn, this costs the average hospital between $5.2 million and $8.1 million per year. While 84.8% of healthcare organizations believe retention is a crucial strategic imperative, it is somewhat absent in operational practice. Curiously, only 51.1% of organizations have a formal retention strategy. ("National Healthcare Retention & RN Staffing Report," 2016).

Because it is a relatively new phenomenon, burnout is difficult to identify and measure. The literature provides a broad definition of the term and the context in which it is found. It reports various relationships and associations of job satisfaction and burnout with a number of continuous and indicator variables. This study analyzes the effects of a series of personal and workplace variables on job satisfaction using ordinary least squares (OLS) on three years of survey data. This study proposes the following hypotheses: 1) personal and workplace factors affect the job satisfaction levels of nurses and 2) increasing injuries and poor personal health caused a decline in total job dissatisfaction from 2013 to 2016.

This study examines the role of numerous variables related to over 1800 registered nurses between 2013 and 2016 in the United States. The purpose of this study is to understand the causes of job dissatisfaction and burnout within the nursing occupation. Through this study, personal and workplace components are revealed as positively, neutrally, or negatively affecting job satisfaction rates. The results supplement the current understanding of nursing burnout and greatly contribute to a blueprint for a

burnout-free healthcare system. This study found that strain injuries, marital and health

statuses, and willingness to take the same job again are correlated with job satisfaction.

Literature Review

Job satisfaction and burnout are recent topics of interest in economics. Healthcare is one field in which growing dissatisfaction of workers is prevalent worldwide. Many academics have attempted to find relationships and associations in order to address this problem. Scholars continue to engage in a wide range of studies regarding the increasingly common syndrome of burnout in physicians and nurses. This literature review will begin by contextualizing burnout (how it happens, to whom it happens, where it happens). It will go on to discuss the consequences of burnout; in some cases, lower-quality patient care has been the result. Associations between burnout and personal and workplace characteristics will then be explored. The literature review will conclude by identifying the ideas from the literature that form the basis for this study.

Job Dissatisfaction and Burnout

Literature regarding worker dissatisfaction and burnout began appearing in the 1970s and has continued to expand in the literature into the 21st century. Maslach and Leiter (2016) define worker burnout as a prolonged response to chronic emotional and interpersonal stressors on the job. They note that the syndrome impairs personal and social functioning, as well as adversely affects the worker's quality of work and health. Similarly, Homer (1985) states that burnout may cause a hard-working individual to become increasingly exhausted, frustrated, and unproductive. More specifically, burnout has three components: (a) emotional and/or physical exhaustion, (b) lowered job productivity, and (c) over-depersonalization (Perlman and Hartman, 1982). When

workers experience these symptoms, they are likely to become dissatisfied and burn out (Rose, Kumar, and Pak, 2009).

Perlman and Hartman (1982) notice that burnout is more prevalent in professions in which human service delivery is of high importance. Such fields include the education system (teachers), social work and child welfare, hospitality (culinary employees and hotel managers), and healthcare (nurses and doctors) (Friedman, 2010; Lloyd, King, and Chenoweth, 2009; Daley, 1979; Jung, Yoon, and Kim, 2011; Kuruüzüm, Anafarta, and Irmak, 2008; Embriaco, Papazian, Kentish-Barnes, Pochard, and Azoulay, 2007). Burnout has also been on the rise in the technology and construction industries (Hetland, Sandal, and Johnsen, 2007; Enshassi, El-Rayyes, and Alkilani, 2015).

As stated previously, burnout is a dilemma that affects the healthcare system. Patel, Bachu, Adikey, Malik, and Shah (2018) assert that healthcare worker burnout may derive from many sources. Workload stress includes working in the proximity of terminal illness, trauma, and death. Psychological stress may cause friction at work, including verbal violence. Economic consequences of burnout may cause health workers to leave their jobs prematurely, the effects of which for hospitals and other health-related work settings are inefficiency and costs due to turnover. These inefficiencies include lost quality, diminished productivity, and lowered morale. These institutions must also bear the costs of recruiting and training new employees. The economic burden increases when new staff members must be recruited and trained due to current health workers' inability to effectively handle stress.

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Health-related departments in which burnout is commonly documented include emergency units, neonatal intensive care units, mental health wards, and pediatric intensive care units (Potter, 2006; Carson, Leary, De Villiers, Bartlett, O'Malley, et al. 1996; Crowe, Sullivant, Miller-Smith, Lantos, 2017; Braithwaite, 2008). Stressors for nurses include staff shortages, poor morale, and health service changes, some of which are not communicated to nurses before they occur. Effects of nurse burnout in these departments are high levels of absenteeism, mental fatigue, and exhaustion (Braithwaite, 2008; Carson et al., 1996). Kalliath and Morris (2002) hypothesize that higher levels of job satisfaction foretell lower levels of burnout. The researchers conclude that job satisfaction has both direct and indirect effects on burnout, which supports job satisfaction as a significant predictor of burnout. A number of other scholars have confirmed this relationship (Piko, 2006; Khamisa, Peltzer, Ilic, Oldenburg, 2016). As more data become available, both from the United States and internationally, the drivers of job dissatisfaction and burnout in nurses continue to be discovered.

Workplace Characteristics

Scholars have sought to discover specific workplace characteristics that affect nurse job dissatisfaction and burnout. Five workplace characteristics have been found and are described in this section. Ilhan, Durukan, Taner, Maral, and Bumin (2007) discovered multiple indicators of dissatisfaction and burnout: total time in the job, weekly working hours, shift-working, and the unit where employed. Stiefel, Sloane, and Aiken (2012) were interested in nurse work schedules and its relationship to burnout and patient

dissatisfaction. Extended work shifts of twelve hours or longer are common for hospital staff nurses. Many nurses who worked these shifts claimed they were satisfied with the hospital scheduling; however, nurses who worked shifts of ten hours or longer were more likely than nurses working shorter hours to experience burnout and job dissatisfaction.

Billeter-Koponen and Fredén (2005) interviewed 10 nurses from various care institutions who had experienced long-lasting stress and burnout, which resulted in taking absences from work for two months or more. The researchers found a significant association between the number of patients, job satisfaction, and burnout. Further, nurses in work units with the highest patient-to-nurse ratios are more than twice as likely to experience job-related burnout compared with nurses in hospitals with the lowest ratios. Sveinsdóttir, Biering, and Ramel (2005) explored Icelandic nurses' occupational stress, job satisfaction, and working environment. They concluded that the strenuous conditions are felt more severely among hospital nurses than among nurses who work outside hospital settings. However, McHugh, Kutney-Lee, Cimiotti, Sloane, and Aiken (2011) found that job dissatisfaction and burnout are higher in nursing home settings than in hospital settings.

Clarke, Sloane, and Aiken (2011) were concerned with the effects of nurse staffing and organization on the likelihood of needle stick injuries in hospital nurses. They discovered that nurses from units with low staffing and poor organizational climates were twice as likely as nurses on well-staffed and better-organized units to report needle stick injuries. Further, Wang, Yao, Li, Liu, Wang et al. (2012) report that the prevalence

of needle stick injuries among nurses is associated with depersonalization, which was defined previously as a key component of burnout. Charney, Zimmerman, and Walara (1991) were interested in registered nurses' back injuries due to lifting in the workplace. When a professional lifting team, rather than nurses, lift clients, there is a significant reduction in lost time. Secondary benefits include greater nursing morale and more satisfied nurses.

Personal Characteristics

Much research has been done regarding the personal characteristics of nurses and how they affect job dissatisfaction and burnout. Personal characteristics that may influence job dissatisfaction and burnout include marital status, physical and mental health status, and financial situation, among many others. Yatkin, Azoury, and Doumit (2003) analyzed the relationship between registered nurses' personal characteristics and life satisfaction, pay, and other factors. They discovered several associations. The first is that staff nurses and unmarried nurses were more dissatisfied than nurses of higher positions and married nurses. The second is that nurses were most dissatisfied with salary and lack of prospects for promotion. Molina-Praena, Ramirez-Baena, Gomez-Urquiza, Canadas, De la Fuente et al. (2018) and Al-Ahmadi (2009) came to the same conclusions regarding marital status, finding that married nurses are more likely than single nurses to do their jobs well and there is a greater prevalence of burnout among single nurses.

Many researchers found relationships between job dissatisfaction and burnout and circumstantial issues, such as a nurse's personal financial situation. Influencing burnout

scores in two studies by Ilhan, Durukan, Taner, Maral, and Bumin (2007) and Estryn-

Behar, Van der Heijden, Oginska, Camerino, Le Nezet et al. (2007) were financial

difficulties and dissatisfaction with pay. Another common factor influencing burnout is

health, both mental and physical. Perceived poor mental, physical, and overall health, and

feelings of anxiety, increase the prevalence of job dissatisfaction and burnout (Ilhan,

Durukan, Taner, Maral, Bumin, 2007; Duquette, Kerouac, Sandhu, Beaudet, 1994;

Laschinger, 2011).

Lower-Quality Care

When nurses become dissatisfied with or burned out from their jobs, the quality of

care they provide to their patients should be called into question. Aiken, Clarke, Sloane,

Sochalski, and Silber (2002) examined how nurse staffing levels affect patient outcomes

and nurse retention in hospital settings. Using data from over 10,000 nurses and 232,000

patients in Pennsylvania, the researchers employed logistic regression models and

compared the odds of several variables. Each additional patient per nurse was associated

with an increase in the odds of burnout and job dissatisfaction. Further, each additional

patient per nurse was associated with a slight increase in the likelihood of the patient's

death within 30 days of admission and a slight increase in the odds of failure-to-rescue

(Aiken et al., 2002). Poghosyan, Clarke, Finlayson, and Aiken (2010) also used a

multiple logistic regression to explore the relationship between nurse burnout and ratings

of quality of care. They found that across six countries, higher levels of burnout were

associated with lower ratings of the quality of care, independent of nurses' ratings of

practice. Similarly, Halbesleben, Wakefield, Wakefield, and Cooper (2008) found that

burnout is not associated with event-reporting behavior but it was negatively associated

with reporting of mistakes that did not lead to adverse events. McHugh, Kutney-Lee,

Cimiotti, Sloane, and Aiken (2011) found similar results and more. As nurse

dissatisfaction and burnout kevels increase, patient satisfaction levels decrease. Health

benefits are also a factor that plays into these nurses' dissatisfaction. Many nurses feel it

necessary that their health benefits be more comparable to those of other while-collar

employees.

This study focuses on the synthesis and intersection of workplace and personal

characteristics of registered nurses and their relationships with job dissatisfaction and

burnout. As explained in this section, a multitude of characteristics have been identified

as key factors in affecting job dissatisfaction and burnout. Further exploration into these

topics not only provides insight into the breadth and depth of the issue of burnout, but

also illuminates the urgent need to create effective systems and programs to limit burnout

in the nursing profession.

Theory and Model

The empirical model used to test the hypotheses in this study describes job satisfaction of nurses as a function of their work hours, their patients, and several indicator variables, including the prevalence of needlestick and strain and sprain injuries, income level, and marital and health statuses. The variable describing whether an RN would take the same job a second time (second decision) acts as a proxy variable for job satisfaction.

$$job\ satisfaction = f(W, X, P, N, S, I, M, H, D)$$

$W\ =\ Work\ hours$

$X = Work\ setting$

$P\ =\ Patients$

$N\ =\ Needlestick\ injuries$

$S\ =\ Strain\ or\ sprain\ injuries$

$I\ =\ Income$

$M\ =\ Marital\ status$

$H\ =\ Health$

$D\ =\ Second\ decision\ to\ take\ current\ job\ again$

The variables are explained in more depth in Data and Sources. The two continuous variables in the empirical model, work hours and patients, and the six indicator variables, needlestick injuries, strain or sprain injuries, income, marital status,

health, and second decision, are explained in the Literature Review. These variables are related either to the RN's workplace or to the RN's personal life. Workplace characteristics may directly influence RN job satisfaction while personal characteristics may indirectly influence RN job satisfaction. The proxy variable, second decision, serves as a measure to corroborate the dataset's estimation and results.

<p style="text-align:center">Data and Sources</p>

The data have been collected for over 1800 participating registered nurses, all of whom are new graduates and have been practicing for some duration within the last year. The model controls for time as the same survey was sent out in 2013, 2015, and 2016. Data were collected by the principal investigators Christine Kovner, R.N., Ph.D., FAAN, Professor, New York University College of Nursing, and Carol Brewer, R.N., Ph.D., Professor, University at Buffalo, The State University of New York School of Nursing. The project is funded by the Robert Wood Johnson Foundation. In the United States, a registered nurse (RN) is a clinician who has completed at least an associate degree in nursing. To become licensed, the RN candidate must successfully complete the National Council of State Boards of Nursing exam, the National Council Licensure Examination - Registered Nurse (NCLEX-RN). The model will be tested using survey data from three sources collected over a period of three years.

Dependent Variable

The dependent variable is job satisfaction, which is the measure for how satisfied a registered nurse is with their job. Participants selected one out of seven options: very dissatisfied, dissatisfied, somewhat dissatisfied, neither dissatisfied or satisfied, somewhat satisfied, satisfied, and very satisfied.

Independent Variables

There are two continuous, numerical independent variables: *patients* and *workhours.* The variable *patients* refers to the number of patients or clients cared for

within the most recent shift. The variable *workhours* refers to the number of hours the RN actually works, as opposed to scheduled, which includes all overtime in a typical work week.

Given the large range of topics and questions covered in the survey data, the model includes several indicator variables. Among these are *worksetting, needlestickinjuries, straininjuries, income, maritalstatus, health,* and *seconddecision.*

The variable *worksetting* refers to the nursing environment where the RN typically works. There are two possible outcomes for this variable: hospital or all else. All else includes outpatient departments, nursing homes, education programs, school health, and others.

The variable *needlestickinjuries* refers to the extent to which RNs have experienced needlestick injuries in their current jobs. The four outcomes are as follows: never, 1 time, 2 times, and 3 or more times.

The variable *straininjuries* refers to the extent to which RNs have experienced strains or sprains in the workplace, including back injuries, in their current jobs. The four outcomes are as follows: never, 1 time, 2 times, and 3 or more times.

The variable *income* refers to the income group of which the RN is a part. Participants' numeric values were placed into one of six income groups: less than $20,000, $20,000 to less than $35,000, $35,000 to less than $50,000, $50,000 to less than $65,000, $65,000 to less than $80,000, and $80,000 or more.

The variable *maritalstatus* refers to the marital status of the RN at the time of the survey. There are three possible outcomes for this variable: married (or domestic partnership), never married, and widowed, divorced, or separated.

The variable *health* refers to the RNs' perceived overall health. The possible outcomes are poor, fair, good, very good, and excellent.

The variable *seconddecision* refers to the RNs' decision to take the same job again, knowing all that it entails. There are four possible outcomes: I would definitely not take the same job, I would probably not take the same job, I would probably take the same job, and I would definitely take the same job.

The first section of the Summary Statistics shows general information about the data. As shown in Table 4.1, the sample size grew substantially from 2013 to 2016. Second, Table 4.2 shows age group frequencies. In 2013 and 2015, the majority of RNs were between ages 30 and 49. In 2016, the majority of RNs were less than 29 years.

In the Summary Statistics section shown below, there are some clear trends that should be noted. Between 2013 and 2016, the majority of nurses were at least somewhat satisfied with their jobs. The means of both continuous variables, *workhours* and *patients*, increased from 2013 to 2016. Specific observations were omitted if they were three standard deviations above or below the mean. Over half of the registered nurses have continued to work in hospital settings. The prevalence of needlestick injuries, strains, and sprains steadily decreased from 2013 to 2016. The data show that RNs' salaries were on the rise between 2013 and 2016. Most RNs in 2013 and 2015 were married while in 2016

most RNs were single. Between 2013 and 2016, nurses reported consistent health statuses, with the overwhelming majority of registered nurses being in good, very good or excellent health. The data is consistent for each response between 2013 and 2016 when RNs were asked if they would choose the same job again.

Table 4.1 *Summary Statistics – Sample Sizes*

	2013	2015	2016
Number of Observations	149	828	893

Table 4.2 *Summary Statistics – Age of RNs*
Age Groups (%)

	2013	2015	2016
Less than 29 years	1.5	0	55.0
30 to 39 years	53.7	49.3	27.4
40 to 49 years	25.8	27.4	13.2
50 or more years	19.0	23.3	4.4

Table 4.3 *Summary Statistics – Dependent Variable*
jobsatisfaction (%)

	2013	2015	2016
Very dissatisfied	3.1	3.3	3.4
Dissatisfied	3.8	3.4	5.1
Somewhat dissatisfied	9.5	10.7	10.1
Neither dissatisfied nor satisfied	3.7	3.8	2.6
Somewhat satisfied	31.7	19.4	21.2
Satisfied	29.1	39.5	40.1
Very satisfied	19.1	20.0	17.5

Table 4.4 *Summary Statistics – Continuous Variables*

	2013				2015				2016			
	$\bar{x}$	s	Min	Max	$\bar{x}$	s	Min	Max	$\bar{x}$	s	Min	Max
workhours	35.7	11.0	0	70	36.0	10.8	0	72	39.2	7.2	0	60
patients	5.0	5.1	0	48	4.3	5.1	0	31	27.3	25.1	0	390

Table 4.5 *Summary Statistics – Indicator Variables*
worksetting (%)

	2013	2015	2016
Hospital	68.0	66.0	80.3
All else	32.0	34.0	19.7

needlestickinjuries (%)

	2013	2015	2016
Never	70.3	74.3	82.7
One time	23.0	18.4	15.0
Two times	5.6	5.5	2.1
Three times or more	1.1	1.8	0.2

straininjuries (%)

	2013	2015	2016
Never	57.5	61.3	69.4
One time	21.6	17.6	20.5
Two times	10.3	11.4	6.9
Three times or more	10.6	9.8	3.2

income (%)

	2013	2015	2016
Less than $20,000	77.9	7.2	2.5
$20,000 to less than $35,000	13.1	5.7	6.6
$35,000 to less than $50,000	3.9	12.0	36.1
$50,000 to less than $65,000	1.1	22.8	38.9
$65,000 to less than $80,000	3.9	23.7	11.6
More than $80,000	0	28.5	4.1

maritalstatus (%)

	2013	2015	2016
Married or in a domestic partnership	74.9	77.1	41.9
Widowed, divorced, or separated	12.2	11.9	9.0
Never married	12.9	11.1	49.0

health (%)

	2013	2015	2016
Poor	0.6	0.6	0.3
Fair	4.6	6.4	5.2
Good	30.6	31.6	27.6
Very good	45.0	43.0	43.4
Excellent	19.3	18.4	23.4

seconddecision (%)

	2013	2015	2016
Definitely not take the same job	3.3	4.5	4.4
Probably not take the same job	12.3	12.0	12.8
Probably take the same job	41.1	37.0	39.9
Definitely take the same job	43.4	46.5	43.5

Estimation and Results

An ordinary least squares (OLS) regression was applied to estimate the effect of the stated variables on job satisfaction over a three-year period. OLS was chosen over a logit model because there are more than five categories within the dependent variable. Therefore, the dependent variable will be treated as continuous (Glen, 2014). The regression equation appears in Equation 1. Distinct personal and workplace characteristics may affect job satisfaction in registered nurses. This study is aimed at ascertaining the connection between the right-hand variables in Equation 1 and the job satisfaction variable that appears on the left-hand side in Equation 1. The betas represent real-number coefficients within the regression.

$$
\begin{aligned}
job\ satisfaction \\
= \beta_0 + \beta_1 workhours + \beta_2 patients + \beta_3 worksetting \\
+ \beta_4 needlestickinjuries + \beta_5 straininjuries + \beta_6 maritalstatus \\
+ \beta_7 health + \beta_8 income + \beta_9 seconddecision
\end{aligned}
$$

$$(1)$$

The following table contains the regression results. Heteroskedasticity was corrected using the robust regression command. The p-values are shown in parentheses below the coefficients. The coefficients in 2015 and 2016 were not different from those in 2013, so the data is not different over the three-year period, which implies the model fails to reject the null hypothesis. Due to this discovery, appending the data from 2013, 2015, and 2016

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will provide more statistical power to the study. Tests that show this finding appear in

Appendix A.

Table 5.1 *Results*

Variable	Coefficient (p-value)
workhours	-.0062807 (0.109)
patients	-.0013176 (0.359)
worksetting: hospital	-.0299698 (0.713)
needlestickinjuries: 1 time	.0261487 (0.747)
needlestickinjuries: 2 times	-.1416196 (0.335)
needlestickinjuries: 3 times or more	0.309439 (0.143)
straininjuries: 1 time	-.1790678 (0.019)
straininjuries: 2 times	-.2814122 (0.009)
straininjuries: 3 times or more	-.3196662 (0.008)
maritalstatus: widowed, divorced, separated	.1369225 (0.218)
maritalstatus: never married	.1389595 (0.047)
health: fair	.7952985 (0.084)
health: good	.8392545 (0.062)
health: very good	1.029441 (0.022)
health: excellent	1.048438 (0.021)
income: $20,000 to less than $35,000	-.1263713 (0.416)
income: $35,000 to less than $50,000	-.1237328 (0.349)
income: $50,000 to less than $65,000	-.0790677 (0.544)
income: $65,000 to less than $80,000	-.019292 (0.892)

income: $80,000 or more	.0792497 (0.593)
seconddecision: I would probably not take the same job	.9162354 (0.000)
seconddecision: I would probably take the same job	2.207339 (0.000)
seconddecision: I would definitely take the same job	2.963751 (0.000)

N	1870
F-stat	32.10
R^2	0.3200

The regression produced some significant results. The R^2 value was 0.32. These values mean that 32.00% of the variance in the variable job satisfaction is explained by the model. Statistical significance was found in four variables: *straininjuries*, *maritalstatus*, *health,* and *seconddecision.*

The variable *straininjuries* refers to prevalence of injuries, such as sprains and strains, including back injuries, on the RN's current job. The signs of the coefficients were negative. As the number of these kinds of injuries increase, RNs become increasingly dissatisfied as compared to RNs who do not experience these kinds of injuries.

The variable *maritalstatus* refers to the relationship status of the RN. The coefficient sign was positive, meaning that RNs who were never married are more satisfied with their job than those who are married or in a domestic partnership.

The variable *health* refers to perceived health status. The sign of the coefficient was positive, meaning that RNs who perceive themselves to be in very good or excellent

health are more satisfied with their jobs than RNs who perceive themselves to be in poor health.

The variable *seconddecision* refers to the possibility of taking the current job a second time. The signs of the coefficients were positive, which means that RNs who would probably not, probably, or definitely take the same job again were more satisfied than RNs who would definitely not take the same job again. As the level of willingness to take the same job increases, job satisfaction increases.

Discussion and Implications

This study lends itself to the developing body of literature that examines the factors contributing to job dissatisfaction and burnout in the field of nursing as well as the healthcare industry as a whole. The findings from this study provide guidance for future research in the field.

The findings for *straininjuries* were not surprising. It is reasonable that job satisfaction would be negatively impacted by sprains and strains in the workplace. The second finding regards the variable *maritalstatus.* It was only found to be positively correlated with single RNs and job satisfaction. It is valid that marriages and relationships can cause stress on one or both individuals involved; however, it also makes sense that marriages and relationships may cause stress-relief due to comfort and reassurance from the partners of RNs. This finding contrasts some scholars' findings regarding job satisfaction and marital status, as explained in the Literature Review. The third findings are for the variable *health*. RNs who are in very good or excellent health are likely to be more productive and competent and generally more professionally satisfied. Previously discussed literature supports this finding. As expected, the variable *seconddecision* is highly correlated with job satisfaction.

Surprisingly, all other variables were not statistically significant. Previous literature presented associations between these variables and job satisfaction. It is surprising that the variable *income* was not statistically significant because often times monetary incentives may drive professional satisfaction. Further, most scholars report on

the relationship between job satisfaction and needlestick injuries rather than strains and sprains so it is unexpected that the variable *straininjuries* is statistically significant while *needlestickinjuries* is not. Similarly, I expected the variable *patients* to be statistically significant due to a higher number of patients and the responsibility to care for them successfully and with the same level of skill. I expected the same for the variable *workhours* due to the fatigue that comes from working long shifts. The literature on the variable *worksetting* is indeterminate for whether hospitals or other settings are the main drivers for job dissatisfaction. This model's estimation did not provide a convincing argument on the topic of factors relating to RN job satisfaction and burnout.

A few recommendations can be made to mitigate the issue of RN job dissatisfaction and burnout. Cleveland Clinic (2016) recommends several steps for RNs to alleviate burnout: identify stressors, delegate, engage in healthy activities, seek support, and practice gratitude. However, these steps are easier said than done. Specifically, all hospitals and other work settings must offer employee assistance programs that include free phone counseling sessions, or other forms of stress management and self-care support. Professional counseling, support groups, and therapy must also be available. RNs may need to learn to keep work life separate from personal life so they can more easily relax when not working. These adaptations include maintaining a well-balanced diet, engaging in regular exercise, and getting adequate rest. Hobbies and relaxation techniques may help to relieve stress ("Nurse Burnout," n.d.).

Colduvell (2017) notes that many nurses do not feel that calling in sick is a solution to having a fever, gastrointestinal symptoms, and/or respiratory symptoms. They fear leaving their patients and colleagues short-staffed, so they risk the health and safety of their own patients to work while sick. This issue occurs because of guilt and the perceived inability to take time off, with or without pay. Many hospitals have cultures that discourage nurses from calling in sick. Hospitals should develop stronger cultures and policies that support nurses' health and provide adequate staffing when nurses are ill.

As highlighted in the Literature Review, the quality of patient care is called into question when RNs are burned out. Jennings (2008) suggests accruing the utility of empowerment and social support in mitigating stress. Nurse managerial support and participative management may help reduce stress. Leaders of healthcare organizations can no longer ignore these findings because they affect every aspect of the work environment – RNs, physicians, relationships with patients, and quality of care.

Limitations and Directions for Further Research

There are several matters that should be considered with respect to this research. First, the data are derived from three surveys pulled from different years. Though the surveys were produced by the same foundation, the spread of the participants seemed fairly dissimilar over the three-year period. This period of time is remarkably short, especially when comparing the change over each year. In Data and Sources, some observations were discarded due to their nature as outliers. For example, an RN reported working 100 hours in a week and another RN reported seeing over 5000 patients in the

last shift. Responses like these skew the results. Lastly, the empirical model tested several

variables against job satisfaction, even though many scholars mentioned in the Literature

Review tested variables against job satisfaction and burnout. This notion is justified

through several scholars' findings that job satisfaction is an indicator of burnout. More

research must be conducted to address these variables and burnout directly. A more

robust dataset would include a wider timespan, a higher level of responses, and a wider

range of demographics of participants.

Conclusion

This research took a quantitative approach to the role that personal and workplace characteristics play in affecting job satisfaction in registered nurses in the United States. Using 2013, 2015, and 2016 survey data, the empirical model utilized in this paper yielded significant results that contribute to the overall understanding and base of literature regarding nursing job satisfaction and burnout. It was found that strain and sprain injuries, marital status, personal health, and willingness to take the same job again strongly correlate to job satisfaction. The findings from this study reveal crucial relationships between these variables and job satisfaction, and could be essential in reducing burnout of registered nurses. These findings could also be translated into a set of short-term and long-term actions to assure the success of the nursing practice into the future.

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Appendix A

Table A.1 *Test to see if there is a statistically significant difference between the 2015 dataset and 2016 dataset*

$2015.\text{Year} - 2016.\text{Year} = 0$
$F(1,1844)=3.44$
$\text{Prob}>F=0.0638$

Table A.2 *Test to see if there is a difference between the 2015 and 2016 datasets and the 2013 dataset.*

$2015.\text{Year} = 0$
$2016.\text{Year} = 0$
$F(2,1844)=1.81$
$\text{Prob}>F=0.1642$