Identifying burnout and its risk factors in Clinical Nurse Specialists

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Identifying burnout and its risk factors in Clinical Nurse Specialists

Abstract
Background: Recently the burnout phenomenon has been studied in bedside nurses. Research has shown poor patient outcomes and nurses leaving the bedside earlier as a result. Burnout has not yet been studied in Clinical Nurse Specialists (CNS).

Purpose: The purpose of this study was to examine the level of burnout in Clinical Nurse Specialists and see if there was a trend or significant risk factors.

Methods: A survey utilizing the Copenhagen Burnout Inventory was distributed through social media platforms for snowball sampling, all online.

Results: There was no difference found between CNSs that had been practicing for greater than five years compared to those practicing for fewer than five years. However, there was a slight increase in the level of burnout reported associated with the longer the CNSs were in practice.

Conclusion: Although there was no significant difference found, CNSs that have been practicing longer reported a higher level of burnout than those who have been practicing less time. Further studies should include larger sample sizes to better study the level of burnout.

Keywords: Clinical Nurse Specialists, Burnout, Nursing, Depersonalization, Emotional Exhaustion.

Document Type
Thesis

Degree Name
M.S. in Advanced Practice Nursing

First Supervisor
Heather McGrane Minton

Second Supervisor
Nancy Wilk

Subject Categories
Nursing

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Dr. Heather McGrane Minton

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Dr. Nancy Wilk

Subject Categories
Nursing
Appendix B

Letter of Introduction and Informed Consent

Primary Researcher: Mackenzie White RN, BS, SJFC CNS Student
E-Mail: mlw09388@sjfc.edu

Faculty Contact: Susan Frederick RN, MSN, FNP-C
E-Mail: sfrederick@sjfc.edu
IRB E-Mail: irb@sjfc.edu

I hold the position of a registered nurse at Strong Memorial Hospital on 3-1800, Kessler Family Burn/Trauma Intensive Care Unit. I also am a Clinical Nurse Specialist student with an adult and geriatric focus at St. John Fisher College of Rochester.

Before agreeing to participate in this research, it is strongly encouraged that you read the following description of this study. This statement explains the purpose and procedures of this study. You have the right to decline participation in this research study. If you chose to proceed with this survey, you cannot withdraw from it. This study has been approved by the Institutional Review Board of St. John Fisher College of Rochester, NY. You can choose not to answer any particular question(s), including the option for gender identification if you do not wish to disclose that information.

Research Study Title: “Identifying burnout and its risk factors in Clinical Nurse Specialists.”

The data collection process for this research study will be an anonymous survey completed online using survey monkey at the convenience of each participant. No harm or discomfort will come to the participant by completing this survey. The survey completed should be no more than a 15-minute time commitment. The data from this research study will be used to assess the level of burnout in Clinical Nurse Specialists and identify risk factors that may lead to it.

I invite you to complete a survey to identify burnout in Clinical Nurse specialists and risk factors that might lead to it. By beginning the survey on the following page you are consenting to participate in this research collection. This consenting process will be completely anonymous; no identifiable information will be noted.
Title:

Student Signature:

The above student has successfully completed this capstone as partial fulfillment of the requirements for the MS in Advanced Practice Nursing degree from the Wegmans School of Nursing at St. John Fisher College.

Advisor Signature:

Date:

This capstone fulfills the requirements of capstone seminars and assists in meeting the program outcomes for the MS in Advanced Practice Nursing degree from the Wegmans School of Nursing at St. John Fisher College.

Second reader Signature:

Date:
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Identifying burnout and its risk factors in Clinical Nurse Specialists

By

Mackenzie White, RN, BSN

Submitted in partial fulfillment of the requirements for the degree

Master's in Advanced Practice Nursing

Supervised by Dr. Nancy Wilk & Dr. Heather McGrane Minton

Wegmans School of Nursing

St. John Fisher College

April 2018
IDENTIFYING BURNOUT IN CLINICAL NURSE SPECIALISTS

Abstract

Background: Recently the burnout phenomenon has been studied in bedside nurses. Research has shown poor patient outcomes and nurses leaving the bedside earlier as a result. Burnout has not yet been studied in Clinical Nurse Specialists (CNS).

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Keywords: Clinical Nurse Specialists, Burnout, Nursing, Depersonalization, Emotional Exhaustion.
IDENTIFYING BURNOUT IN CLINICAL NURSE SPECIALISTS

Background

While the goal of healthcare providers is to achieve complete satisfaction for each patient, they are often hindered by factors beyond their control including staff shortages, high stake situations, and high acuity. All of these factors can lead to burnout. Burnout is defined as:

A psychological response to work-related stress that consists of emotional exhaustion (a depletion of work-related emotional resources), depersonalization (pulling away from those associated with the job), and reduced perceptions of personal accomplishment (a belief that one is not as good at the job as he or she once was)” (Halbesleben, Wakefield, Wakefield & Cooper, 2008, pg. 561).

Given difficult and overwhelming standards demanded by the Joint Commission and Magnet, studies assessing burnout have shown bedside nurses have increased feelings of “moral distress” when asked to care for patients under less than ideal care settings like poor staffing ratios and complex care assignments (Rice, Rady, Hamrick, Verheijde & Pendergast, 2008, p. 361). It is important to note that these feelings of distress are not based solely on their difficult work conditions, but are also rooted in the nurses’ desire to provide excellent care (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002; Rice et al., 2008; Van Bogaert, et al., 2014).

Factors associated with increased risk of nurse burnout include pressure to perform medical treatment they felt was unsafe, staffing shortages and poor relationships with physicians and other providers (Aiken et al., 2002; Rice et al., 2008; Van Bogaert et al., 2014). Prior research has found an association with increased burnout leading to less careful attention to job duties (Halbesleben, Wakefield, Wakefield, & Cooper, 2008). It is
IDENTIFYING BURNOUT IN CLINICAL NURSE SPECIALISTS

plausible to believe if a nurse’s resources were limited or lost, it could potentially result in poorer patient outcomes. If nurses have adequate job satisfaction and experience less burn out, the potential for quality patient care is possible. A study entitled *Nurse staffing, burnout, and health care—associated infection* found a relationship between burnout and infections in patients. The higher the level of burnout, the more surgical site and urinary tract infections were seen (Cimiotti, Aiken, Sloane & Wu, 2012).

The majority of research on nursing burnout has been focused on bedside nurses. However, Clinical Nurse Specialists (CNSs) are in a unique position to experience burnout due to their responsibilities of working with nursing staff, caring for patients and system-wide initiatives focused on improving care, educating staff and streamlining the process of care. Based upon these extra pressures, it is important to determine the extent to which burnout affects CNSs. Given the lack of research assessing the relationship between CNSs and burnout, the purpose of this study was to assess the level of burnout in CNSs, if any, and to determine what risk factors may be associated with it.

**Methods**

This cross-sectional study used snowball sampling to enroll a target of 30 CNSs to complete an online survey about burnout. The study was disseminated through Facebook via Survey Monkey. Inclusion criteria included being a CNS, being able to read and comprehend in English, and having access to a computer or smartphone to complete the online survey. Exclusion criteria included being unable to read and comprehend English or not being a CNS. Demographics were collected at the time of the
IDENTIFYING BURNOUT IN CLINICAL NURSE SPECIALISTS

survey, which included gender, ethnicity, length of CNS career, what population the CNS worked with, and the age of their patients/clients.

The participants completed the Copenhagen Burnout Inventory that assessed personal burnout, work-related burnout, and client-related burnout of each individual participant (Kristensen, Borritz, Billadsen & Christensen, 2005). The Copenhagen Burnout Inventory is free for public use (per the author). The tool has been shown to be both reliable and valid (Kristensen et. al., 2005). The Cronbach’s Alpha for the current study was 0.95. The tool is split into three categories as described above (personal, work-related and client-related burnout). Each category has sub-questions related to each topic. There were a total of 19 questions from the tool all using a Likert scale. Answers ranged from always or to a very high degree to never/almost never or to a very low degree. The average time to complete this survey was less than five minutes.

For this study, descriptive statistics were calculated for demographic variables and independent samples t-tests were used to analyze the Copenhagen Burnout Inventory. All analyses were conducted in SPSS version 24 (IBM SPSS, version 24).

Results

Ten respondents completed the survey; however, three responses were not CNSs (30%) and were removed from the analyses. Therefore, the final sample size was seven or 70%. All respondents were female and Caucasian. Demographics are shown in Table 1.
Table 1: *Demographics*

<table>
<thead>
<tr>
<th>Question</th>
<th>n</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CNS:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>7</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Gender:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>7</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Ethnicity:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>7</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Length of CNS career:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-6 months</td>
<td>1</td>
<td>14.30%</td>
</tr>
<tr>
<td>6 months-1 year</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>1-3 years</td>
<td>1</td>
<td>14.30%</td>
</tr>
<tr>
<td>3-5 years</td>
<td>1</td>
<td>14.30%</td>
</tr>
<tr>
<td>5-10 years</td>
<td>2</td>
<td>28.60%</td>
</tr>
<tr>
<td>10+ years</td>
<td>2</td>
<td>28.60%</td>
</tr>
<tr>
<td><strong>Where:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inpatient</td>
<td>4</td>
<td>57.10%</td>
</tr>
<tr>
<td>Teaching/Education</td>
<td>1</td>
<td>14.30%</td>
</tr>
<tr>
<td>Outpatient</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>(Other)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education/Inpatient</td>
<td>1</td>
<td>14.30%</td>
</tr>
<tr>
<td>Across the healthcare</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Age of patients/clients:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neonatal 0-6 months old</td>
<td>1</td>
<td>14.30%</td>
</tr>
<tr>
<td>Pediatrics 6 months-17</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>years old</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adults 18-64 years old</td>
<td>6</td>
<td>85.70%</td>
</tr>
<tr>
<td>Geriatrics 65+ years old</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Type of patients/clients:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardiac</td>
<td>1</td>
<td>14.30%</td>
</tr>
<tr>
<td>Critical Care</td>
<td>1</td>
<td>14.30%</td>
</tr>
<tr>
<td>Neurology</td>
<td>1</td>
<td>14.30%</td>
</tr>
<tr>
<td>Surgical</td>
<td>1</td>
<td>14.30%</td>
</tr>
<tr>
<td>All of the Above</td>
<td>3</td>
<td>42.90%</td>
</tr>
</tbody>
</table>

Table 2 shows the answers to the Copenhagen Burnout Inventory. A mean burnout score was calculated for the full sample (M=43.05, SD=19.15). The researcher was interested in determining whether there was a difference in mean burnout scores
IDENTIFYING BURNOUT IN CLINICAL NURSE SPECIALISTS

between those employed for shorter versus longer time frames. The sample was collapsed into two groups defined as those with less than five years of experience (n=3, 42.86%) and those with greater than five years of experience (n=4, 57.14%). An independent samples t-test showed no difference in the mean burnout scores between those with less than five years of experience (M=41.23, SD=8.76) and those with greater than 5 years of experience (M=44.41, SD=26.02) (t(5) = -0.199, p=0.85).

Table 2: Scale output: the % of respondents (N=7)

<table>
<thead>
<tr>
<th>Question</th>
<th>Always of To a very high degree (Scoring 100%)</th>
<th>Often or To a high degree (Scoring 75%)</th>
<th>Sometimes or somewhat (Scoring 50%)</th>
<th>Seldom or To a low degree (Scoring 25%)</th>
<th>Never/almost never or To a very low degree (0%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal burnout</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How often do you feel tired?</td>
<td>0%</td>
<td>42.90%</td>
<td>42.90%</td>
<td>14.30%</td>
<td>0%</td>
</tr>
<tr>
<td>How often are you physically exhausted?</td>
<td>0%</td>
<td>42.90%</td>
<td>57.10%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>How often are you emotionally exhausted?</td>
<td>14.30%</td>
<td>28.60%</td>
<td>42.90%</td>
<td>14.30%</td>
<td>0.00%</td>
</tr>
<tr>
<td>How often do you think: &quot;I can't take it anymore?&quot;</td>
<td>0%</td>
<td>0%</td>
<td>28.60%</td>
<td>42.90%</td>
<td>14.30%</td>
</tr>
<tr>
<td>How often do you feel worn out?</td>
<td>14.30%</td>
<td>14.30%</td>
<td>42.90%</td>
<td>14.30%</td>
<td>14.30%</td>
</tr>
<tr>
<td>How often do you feel weak and susceptible to illness?</td>
<td>0%</td>
<td>14.30%</td>
<td>42.90%</td>
<td>14.30%</td>
<td>28.60%</td>
</tr>
</tbody>
</table>

Work-related burnout

Do you feel worn out at the end of the working day? 0% 42.90% 28.60% 14.30% 14.30%
Are you exhausted in the morning at the thought of another day at work? 0% 0% 42.90% 28.60% 14.30%
Do you feel that every working hour is tiring for you? 0% 14.30% 28.60% 28.60% 28.60%
Do you have enough energy for family and friends during leisure time? 14.30% 14.30% 28.60% 42.90% 0%
Is your work emotionally exhausting? 14.30% 14.30% 57.10% 14.30% 0%
Does your work frustrate you? 14.30% 14.30% 42.90% 28.60% 0%
Do you feel burnt out because of your work? 14.30% 28.60% 14.30% 28.60% 14.30%

Client-related burnout

Do you find it hard to work with clients? 0% 14.30% 0% 57.10% 28.60%
Does it drain your energy to work with clients? 0% 14.30% 14.30% 42.90% 28.60%
Do you find it frustrating to work with clients? 0% 14.30% 14.30% 57.10% 14.30%
Do you feel that you give more than you get back when you work with clients? 14.30% 14.30% 28.60% 42.90% 0%
Are you tired of working with clients? 0% 14.30% 0% 57.10% 28.60%
Do you sometimes wonder how long you will be able to continue working with clients? 0% 28.60% 28.60% 28.60% 14.30%

Discussion

The purpose of this study was to determine the level of burnout and identify what risk factors affected CNSs. The results suggested that CNSs did not experience burnout
IDENTIFYING BURNOUT IN CLINICAL NURSE SPECIALISTS
or had risk factors that were statistically significant. However, while a statistical
difference was not demonstrated, the data increased in the expected direction (CNSs with
a longer career, had higher levels of burnout).

The limitations of this study included a small sample size and non-CNSs taking
the survey. Strengths of this study were that the relationship was in the expected direction
and that a gap in the literature was being addressed. This study was similar to previous
research in that it attempted to assess the level of burnout in nurses, and in particular,
CNSs. Previous studies have not shown an association of length of time in job to burnout,
but did provide support that higher levels of depersonalization were associated with less
time in the job (Halbesleben et al., 2008). For future research, it would be important to
continue to explore the impact of burnout in CNS’s.

**Conclusion**

Additional research needs to be conducted on CNS burnout. There will continue
to be a risk to patients and their safety as long as burnout is present in members of the
healthcare team. Studying burnout in CNSs may, in turn, help prevent and reduce burnout
in bedside nurses. This study provided some support that burnout in CNSs may be
associated with length of time in practice and contributed to the scant literature regarding
burnout in CNSs. Future research regarding burnout in CNSs should be conducted with
increased sample sizes and various settings for generalizability.
IDENTIFYING BURNOUT IN CLINICAL NURSE SPECIALISTS

References


IBM SPSS Statistics for Windows, version 24; IBM Corp., Armonk, N.Y., USA.


Identifying burnout and its risk factors in Clinical Nurse Specialists

Mackenzie White RN, BSN
Clinical Nurse Specialist Graduate Student
Wegmans School of Nursing
St. John Fisher College
Capstone II

Introduction
• The higher the level of burnout, the more surgical site and urinary tract infections were seen.¹
• Nurses have felt increased feelings of "moral distress" when asked to care with poor staffing ratios and complex care assignments.²
• Increased risk of nurse burnout include pressure to perform medical treatment they felt was unsafe, staffing shortages and poor relationships with physicians and other providers.³⁴

Purpose
• To assess the level of burnout in CNSs, if any, and to determine what risk factors may be associated with it.

Methodology
• Sample n=7
• 10 participants, 3 excluded because they were not Clinical Nurse Specialists.

Methodology Continued
• Survey on Survey Monkey advertised through Facebook.
• Use of demographic questions and the Copenhagen Burnout Inventory
  – Likert Scale 1-5
• Open for 1 month
• Less than 5 minutes to complete
Results

- Two groups defined as those with less than five years of experience (n=3, 42.86%) and those with greater than five years of experience (n=4, 57.14%).
- Although there were no statistically significant differences, the results trended in the expected direction.

Dissemination

- Submit manuscript to the American Journal of Psychology.
- Submit manuscript to Fisher Digital Publications.

References

Mackenzie White
Lit Matrix #1
Hospital nurses’ work environment, quality of care provided and career plans

Citation

Purpose
The purpose of this study was to examine the relationship between the hospital nurses’ work environment, their career plan and the quality of care provided. It is thought by the researchers that nurses are greatly unhappy with the increased demands of their healthcare jobs with greater intent to leave their current positions. Their research questions included:

1. “Which organizational attributes characterize hospital nurses’ work environment in the Netherlands?”
2. What is the relationship between the characteristics of hospital nurses’ work environment and the quality of care provided as perceived by nurses?
3. What is the relationship between the characteristics of hospital nurses’ work environment and nurses’ career plans?” (Hinno et al, 2011).

Subjects
The subjects were obtained using random sampling (n=1000) of nurses on the National Nurses Association of the Netherlands database. Only 334 of the original 1000 replied to the survey.

Sample Characteristics
Sample Characteristics of this study included:
1. 90% female, 10% male
2. 33% were equal to or under the age of 30
3. 27% had equal to or less than 5 years of experience
4. 97% of responses were from nurses in district hospitals instead of academic hospitals
5. 93% of the respondents were in permanent positions

Study Design
The study was designed as a cross-sectional questionnaire survey of nurses in the Netherlands as a qualitative study.

Date Collection Method
The method used to collect the data was the Nursing Work Index-Revised instrument. The nurses that responded to the survey used a four-point scale rating from strongly agree to strongly disagree. They judged the amount that the items in the survey applied to their practice. The five items they judged their work environment on included:

1. “Support for professional development
2. Adequate staffing
3. Assuring nursing competence
4. Supportive management
5. Teamwork with physicians” (Hinno et al, 2011)

The validity and reliability were evaluated after it was determined that the translation from Dutch to English was accurate.

Data Analysis Method

SPSS Statistics 17.0 and Exploratory factor analysis with Varimax rotation. Descriptive Statistics were also used.

Results

It was found that 81% of the participants experience the support for their further education in nursing, however 46% were concerned that there were limited opportunities for advancement and 55% were concerned with their job and career development. Only 56% of nurses thought that they had enough staffing to complete work and 67% said they felt there was adequate RN staff on their unit.

74% of nurses felt they had a good orientation program and named their supervisor. 62% nurses said there was active quality control systems that related to nurses’ work. 88% of these participants felt that they had an opportunity to participate in internal hospital governance.

68% of nurses thought their nurse manager was supportive and has excellent management and leadership skills. 61% of these nurses felt their nurse manager backs their decision-making even if it means a conflict with a physician. 77% of respondents thought that there were good working relationships between physicians and nurses as well as 80% thought the physicians gave high quality care.

82% thought their current work was challenging however 95% voiced positive feelings about what they do every day.

Discussion

This study has shown us that nurses need a number of things to feel they have a positive work environment, including good teamwork among all team members, support by their superiors, and opportunities for advancement if the nurse wishes, adequate staffing and competence of nursing staff. It is also thought, supported by the research in this article that in order to retain nursing staff, you have to invest in them. Further research is still needed to continue to understand all factors that lead to a positive work environment. The study may have been weaker for our purposes because it was translated from Dutch to English and we hope that information
was not lost in translation. It also only had 33.4% of surveys returned, it would be interesting to see if results would have varied with more replies.
Mackenzie White  
Lit Matrix #2  

Determinants of moral distress in medical and surgical nurses at an adult acute care hospital

Citation


Purpose

The purpose of this study was “to determine the prevalence and contributing factors of moral distress in medical and surgical nurses” (Rice et al, 2008). The researchers were looking to create a study that examined the specific factors that lead to moral distress in medical-surgical nurses in a hospital setting as well as how often these nurses were in futile care situations.

The article describes “futile care” as the treatments and/or interventions that are aggressive in nature to treat patients that are terminally ill or less likely to live. The researchers also use the term “moral distress” which they describe as a psychological burden on nurses who are faced with ethical situations are pressured to deliver care that is not always in the best interest of the patient due to certain constraints like time, physician pressure or their institute’s policy.

Subjects

The subjects were obtained by asking all medical-surgical nurses (n=284) in a 200 bed tertiary care hospital in the southwest of the USA. Of the original 284 nurses, 269 of the nurses agreed to participate. 9 surveys were rejected due to incomplete information, leaving the study with 260 full respondents. The researchers removed all identifying data however assigned a number to each survey and kept track of which unit each survey came from to determine unit specific results.

Sample Characteristics

The sample characteristics of this study included:
1. The median age of participants was 34 years (range of 21-61).
2. 96% were female, 4% male.
3. Median time in their current position was 3 years (range of 3-16).
4. Median years of nursing experience was 6 years (range of 0.3-42)
5. 5% of participants had a diploma degree.
6. 29% had an associate’s degree.
7. 62% had a bachelor’s degree.
8. 4% had master’s degree.
Study Design

The study design was a cross-sectional survey for medical-surgical nurses in different units in a tertiary care hospital in 2006. The survey was administered on a unit education day. The patient populations these nurses cared for included: general surgery, general medicine, neurology, cardiology and cardiac surgery, oncology and transplant.

The survey included 38 situations that can potentially produce ethical situations and moral distress that nurses see in everyday practice. These situations included several categories such as: “individual responsibilities (physician practice, nursing practice and institutional factors), care not in the patient’s best interest (futile care), deception and euthanasia” (Rice et al, 2008).

Data Collection Method

The method used to collect the data was the Moral Distress Scale tool. This scale measures the nurses’ perception of two categories, previously discussed, intensity of moral distress and the frequency of this encounter.

Moral distress was measured using a Likert scale 0-6 “with 0 reflecting no moral distress and 6 a great extent of moral distress” (Rice et al, 2008).

Frequency of encounter was also measured using a Likert scale 0-6 “with 0 reflecting no encounter and 6 very frequent encounters” (Rice et al, 2008).

Data Analysis Method

The data was placed into an excel spreadsheet with each participants score. The researchers used JMP Statistical 6.0 for their statistical analysis. They used descriptive statistics as well as hypothesis testing.

Results

It was found that in the situations in which nurses reported the prevalence of moral distress was highest in the category of physician care:
1. “Providing care that does not relieve the patient’s suffering because physician fears increasing dose of pain medication will cause death”
2. ‘Work with physicians who are not as competent as the patient care requires’” (Rice et al, 2008).

In nursing practice, participants said that they felt the most moral distress when:
1. “‘Carry out a work assignment in which I do not feel professionally competent’
2. ‘Work with levels of nurse staffing that I consider unsafe’
3. ‘Work with nurses who are not as competent as the patient care requires’
4. ‘Work with nursing assistants who are not as competent as patient care requires’” (Rice et al, 2008).
The most futile care situations the nurses encountered were:
1. “Follow the family’s wishes for the patient’s care when I do not agree with them but do so because hospital administration fears a lawsuit’
2. ‘Follow the family’s wishes to continue life support even though it is not in the best interest in the patient’
3. ‘Carry out a physician’s order for unnecessary tests and treatment’
4. ‘Carry out the physician’s orders for necessary tests and treatments for terminally ill patients’
5. ‘Follow the family’s request not to discuss death with a dying patient who asks about dying’
6. ‘Follow orders for pain medications even when the medications prescribed do not control the pain” (Rice et al, 2008). **Highest rated answer

The predictors for moral distress were nurses >34 years old, with >3 years in their current job and >6 years of total nursing experience. It should also be noted that nurses who worked in oncology and transplant patients felt the highest intensity of moral distress and futile care.

Discussion

The study allows us to take a look at how nurses feel ethically about their work environment. This research suggests that the participants overall feel morally distressed in the jobs frequently and are often put into situations that may not be in the best interest of their patient due to pressures from physicians, family members and policies. We see through this research that the longer you are in the nursing practice the more you are exposed to ethically difficult situations which has a tendency to weigh heavy on nursing staff. It is natural that the more experience you have, the more you experience this type of stressor. It is thought by the researchers “the build-up of moral distress can elicit negative caregiving experiences throughout a nurse’s career and eventually culminate in the ‘burnout’” (Rice et al, 2008). It is thought that burnout in nurses can lead to turnover in staffing and/or decrease in staff satisfaction.

The researchers of this study discuss communication as an important factor of decreasing moral distress and futile care situations. It is thought that if better communication is involved in caring for our patients we will be able to eliminate the tension between nurses, physicians and patients/families. Open dialogue is encouraged so nurses can express their concerns about the care being delivered, suggest ideas to improve the quality of care and felt heard by their multidisciplinary counterparts. Ultimately if communication is better and moral distress/futile care are decreased, one would believe our nurses would feel increased empowerment and satisfaction resulting in less burnout.

The study has good internal validity because of a high response rate and the inclusion of all medical-surgical nursing in the sample. The study’s external validity can be questioned because it was only done in one hospital. We are unable to determine if the sample characteristics are transferrable to different hospitals. It would increase external validity to do a similar study throughout several hospitals across the country.

**Purpose**

The purpose of this study was to examine the relationship between nurse staffing/burnout and health care—associated infections. More specifically looking at urinary tract infections and surgical site infections because they are the most common. The authors of this article wanted to look specifically at burnout because no published study has been able to link burnout and these health care—associated infections. The authors are stated, “Job-related burnout has been linked to suboptimal medical care and patient satisfaction” (Cimiotti et al. 2012). Nurse staffing related to these infections was also examined.

**Subjects**

The subjects chosen for this study were picked based on the 2006 Pennsylvania Health Care Cost Containment Council (PHC4) report on hospital infections and the hospitals that were included in this report. The authors used a list provided by the Pennsylvania state board of nursing to mail surveys to these nursing that worked in the hospitals included in the PHC4. The overall response to the survey was only 41%. The authors then sent a second survey to a random sample of 650 nurses who did not respond to the first survey. They were able to receive a 92% response rate from this group only after “extensive follow-up and compensation” (Cimiotti et al. 2012). Although it is not stated what kind of follow-up or compensation was offered, the authors state “no substantive differences in responses between those that originally responded and those that responded after increased efforts, indicating no systematic bias in the broader sample of survey respondents” (Cimiotti et al. 2012).

**Sample Characteristics**

Sample Characteristics included:

Hospital Characteristics: (n=161)
1. Mean bed size: 227
2. Teaching status: 12% were major teaching hospitals, 36% were minor (Minor vs. Major was determined based on the number of trainees to bed ratio)
3. High technology: n=63
4. Nurse staffing: mean of 5.7 patients per nurse
Nurse Characteristics: (n=7076)
1. Mean age: 43.9
2. Sex: 94.5% women, 5.5% men
3. 37.8% had a bachelor’s degree or higher
4. An average of 17.2 years of experience
5. 36.5% of the nurses reported a high burnout score on their survey

Study Design

This study merged three data sources that were all completed in Pennsylvania to determine how nurse staffing and burnout related to reported health care—associated infections. They used a cross-sectional survey to gain information about self-reported emotional feelings and their job. They used the PHC4 to determine the infections reported in the same hospitals that the nurses worked in as well as used information from the Annual Survey on hospital characteristics (AHA) to determine the hospital setting in comparison to the infection rates and nurse reported burnout.

Data Collection Method

The survey used to question the nurses was the Maslach Burnout Inventory—Human Services Survey (MBI-HSS). According to the article the MBI-HSS is “a highly reliable and valid instrument that contains 22 Likert-type items on job related attitudes that assess the 3 distinct subscales of burnout: emotional exhaustion, depersonalization, and personal accomplishment” (Cimiotti et al. 2012). The authors only used the emotional exhaustion subscale due to it being a major contributor to burnout. The researchers used a score of greater to or equal to 27 to classify the nurse as having a high burnout score. As previously stated the survey was mailed to nurses that worked in the 161 hospitals that were a part of the PHC4 report. The researchers used a second survey to grow their sample size.

Data Analysis Method

The researchers used SAS version 9.2 for all analyses. Their statistical significance was set at p<0.05. They created 3 linear regression models to determine the effects of nurse staffing and/or burnout on infection rate (urinary tract infections [UTI] and surgical site infections [SSI]). In the first model they compared nurse staffing and hospital acquired infection. The second model compared nurse burnout and infection rate. Lastly they compared both nurse staffing and burnout with the infection rates.

Results

The results of this study show significant findings for the most part. Urinary tract infections were seen in 8.6 patients per 1000 and 4.2 per 1000 in surgical site infections. In the first regression model, they found a p=.02, where an additional patient per nurse showed an increase of another 1 patient per 1000 that would acquire a UTI. Using that
number for the study population, that translates to an additional 1351 UTIs for each additional patient added to the nurses workload. They also found a $p=.04$ for SSIs.

In the second regression model they found that nurse burnout was highly associated with UTIs (burnout=0.85, $p=.02$) and SSIs (burnout= 1.58, $p<.01$). This means “a 10% increase in a hospital’s composition of high-burnout nurses is associated with an increase of nearly 1 urinary tract infection and 2 surgical site infections per 1000 patients” (Cimiotti et al. 2012).

In the third and final regression model, the researchers did not find significant value ($p=.54$) for nurse staffing/UTIs, and ($p=.09$) for nurse staffing/SSIs. But there were significant findings for burnout and UTIs at ($p=.03$) and SSIs ($p<.01$).

The researchers provided us with an additional table that shows what would happen if you decrease burnout by 10, 20 and 30% and how many infections would be prevented and how much money could be saved. Based on the information received from this study:

<table>
<thead>
<tr>
<th>Reduction in burnout</th>
<th>UTIs prevented</th>
<th>High Cost Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>-10%</td>
<td>1335</td>
<td>$1,111,059</td>
</tr>
<tr>
<td>-20%</td>
<td>2671</td>
<td>$2,222,119</td>
</tr>
<tr>
<td>-30%</td>
<td>4006</td>
<td>$3,333,178</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reduction in burnout</th>
<th>SSIs prevented</th>
<th>High Cost Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>-10%</td>
<td>744</td>
<td>$21,914,009</td>
</tr>
<tr>
<td>-20%</td>
<td>1489</td>
<td>$43,828,017</td>
</tr>
<tr>
<td>-30%</td>
<td>2233</td>
<td>$65,742,026</td>
</tr>
</tbody>
</table>

(Cimiotti et al 2012)

**Discussion**

In conclusion, this study has shown a significant relationship between nurse staffing and nurse burnout with the 2 most common health care-associated infections (UTIs and SSIs). The researchers believe that nurse burnout has been linked to “job dissatisfaction and overall quality of patient care” (Cimiotti et al 2012). At least not yet. With further investigation of burnout and how it relates to patient outcomes there can be more work done to find out where the focus of fixing burnout is. The researchers mentioned at the end of their article that they “hypothesize that the cognitive detachment associated with high levels of burnout may result in inadequate hand hygiene practices and lapses in other infection control procedures among registered nurses” (Cimiotti et al 2012). Although not tested, their hypothesis would serve as an interesting research topic. Thinking that nurses mentally check out and don’t care about their job because they burnout could have a correlation with relaxed nursing practices like not washing hands as frequently or thoroughly. Yet, that is something that has not yet been studied, but could potentially be done.

This study has done an excellent job of linking nurse staffing and burnout to these specific infections however it had some limitations. Such as the nurses that responded to the survey could not be linked to the specific patients that acquired this health-care
associated infections. There is no way to tell if those nurses that reported higher levels of burnout are those nurses that caused the infections. The researchers also acknowledged that health care associated infections often occur in those high-risk patients (ex. Burns or organ transplant). However the PHC4 did not include high-risk patients in their report, only low-risk patients were reported. This study had good internal validity because the nurses were chosen at random, without identifying information. Some would question if there was bias due to the “compensation” that was provided to get more nurses to respond, however we are unaware of what that compensation was. This study could have good external validity because it was used on many different hospitals, except they were only in Pennsylvania. We could question if this could be translated to hospitals across the country but it was used in different kinds of hospitals across the state.

The researchers suggest that the health care facilities could improve the nurse staff and other parts of the work environment to improve their infection rate and lower costs. Research in the future would benefit from seeking out which specific factors cause nurses to burnout and how we can prevent this to improve job satisfaction and patient outcomes.
Mackenzie White
Lit Matrix #4

Nurse burnout and patient safety outcomes: nurse safety perception versus reporting behavior

Citation

Purpose
The purpose of the study was to look at the relationship between burnout in staff nurses and what those same nurse’s perceptions of patient safety and adverse event/near-miss reporting behaviors. In other words, the researchers were asking, if a nurse is more burnt-out, are they less likely to report adverse events and see their working environment as less safe for patients?

The researchers mentioned several previous studies that examined similar questions and topics. The previous research included looking at variables that predict burnout, linking burnout with patient satisfaction, or staffing on units. They used the Conservation of Resources model (COR), which is the theory that explains the process of burnout. According to the article the COR “is based on psychological processes associated with resources, defined as those psychological commodities that we value (e.g. meaningful employment, time with family, satisfaction with life and work etc.)” (Halbesleben et al. 2008). The COR suggests that stress and burnout can result from one of or a combination of all 3 processes which include: loss of resources, threat to current resources or inadequate return on investments made to maximize resources.

Subjects
The subjects used in this study were pulled from a Midwestern Veteran’s Administration hospital. The survey was sent to 295 individuals, only 148 were returned giving the researchers a response rate of about 50%. Those that chose to complete the survey and participate in the study gave informed consent and all identifying data was removed. Only the respondents that had direct patient contact were included in this study (n=135, 91%).

Sample Characteristics
1. 23 participants were from ICU’s, 22 from on-site clinics and 15 from medical surgical units.
2. 90 of participants were registered nurses. 17 were licensed practical nurses. 10 were nurse practitioners.
3. 95% of participants stated that they work 40 hours or more a week.
4. 50 participants said they had only worked there for 0-5 years. While 56 participants had been there more than 16 years. (At that hospital)
5. 86 participants had worked in their current work area less than 5 years.
6. 95 of the participants had worked as a nurse for 16 years or more.

Study Design
This study was designed as a cross-sectional study done in a Midwestern VA hospital in the United States. The researchers used different types of surveys to gather the information needed using different tools previously tested and found to be reliable. After two weeks of initial contact, the researchers sent an additional copy of the survey to nursing staff encouraging participation. The researchers modeled their study after previous researchers looking at similar events as well as used the COR as a guideline when examining burnout.

Data Collection Method
The first survey used by the researchers was the Maslach Burnout Inventory (MBI), which is the most commonly used in burnout research. It is a 22-item measure that includes subscales for emotional exhaustion (9 items), depersonalization (5 items) and personal accomplishment (8 items) (the latter was not used in this study because recent literature had questioned the validity of it). According to the authors, previous research has deemed this tool to be highly reliable (Halbesleben et al. 2008).

The second item used was The Agency for Healthcare Research and Quality (AHRQ) Patient Safety Culture Survey. This tool was used to measure and assess patient safety outcomes. This survey assesses two items that assess patient safety perceptions such as safety grade and safety perceptions. Safety grade allows the respondent to give a letter grade to their units patient safety (A [4] to F[0]). Safety perceptions are rated with Likert responses about how much they agree or disagree with statements like “Patient safety is never scarified to get more work done” (Halbesleben et al. 2008). Event reports were assessed with the question: “In the past 12 months, how many even reports have you filled out or submitted” (Halbesleben et al. 2008). The answers included ranges of 1-2 reports, 3-5, 6-10, 11-20 and 21 or more reports. The near miss reporting questions included several items that asked respondents about near-misses and how frequent they are.

Data Analysis Method
The researchers used multiple regression analysis after controlling for work-related demographics. They used means, standard deviations and scale reliability estimates (Cronbach’s α) correlations for study measures.

Results
As for the results the researchers found that exhaustion and depersonalization were highly correlated with r=0.70. They did not find that unit and hours worked were significant with burnout, however they did find that the nursing staff with less experience
and fewer years at the hospital had higher reports of depersonalization. Overall the results are showing that the higher the burnout rate, the lower the patient safety grade equating to a less safe environment for their patients.

The nurses gave their units an average of a B-grade for their unit safety. The data showed that an average of 1-2 event reports were completed in the last year, where there was an average of 3.23 near-miss reports which shows preventive reports occurred somewhere between sometimes and most of the time in the hospital (Halbesleben et al. 2008). The results are also showing that the higher burnout score, the less events reporting occurs.

Discussion

This study does a good job and showing a relationship between burnout and safety for patients as perceived by the nurses. It is important to look at factors that cause burnout and why they may have an influence over reporting events or near-misses. There is a fear of penalty on the nurse if an event is reported. A nurse may not report something if there were no negative outcomes on the patient. The article also suggests that time to complete and extra work prevent nurses from reporting because it is just added one more thing to their already long list of tasks and work to do. There already aren’t enough hours in a shift to adequately care for your patients and document every single detail all the while rushing to the bedside to accommodate every need of each patient. Adding additional work does not help the nurse in the immediate future. However the reason these events reporting systems are in place are not to punish the nurse every time a mistake happens, they are more designed to look at a problem and hopefully find a solution so it doesn’t happen again, whether that means adjusting a practice or changing hospital policy

This study had some limitations that include a minimal response rate and that it was only completed at one hospital. It’s external validity could be compromised by the small amount of response however a power analysis could have helped them determine if their sample size was enough to show significance. It’s internal validity seemed good for it’s reliable instruments and recruiting tactics.

Like any study or topic of interest, more research is always indicated and needed. The researchers suggest further study of burnout and events reporting but suggest overall research be done on how burnout effects patients. Above all we are caring for patients and we must look at how our actions (although they don’t seem to have a direct impact in our day to day work) are effecting our patients. If we are burnt out and distancing ourselves from our work and doing the bare minimum we are doing an ultimate disservice to those we’ve sworn to protect. If we continue to study and educate on burnout we can help to decrease it in our nurses ultimately bettering our practice.
Nursing unit teams matter: impact of unit-level nurse practice environment, nurse work characteristics, and burnout on nurse reported job outcomes, and quality of care and patient adverse events—a cross-sectional survey

Citation

Purpose
The purpose of this study was to look at the impact of the nursing practice environment factors, characteristics and burnout on nurse reported job outcomes, quality of care and patient adverse events (Van Bogaert et al, 2014). The authors were looking at which particular aspects of a nurses work environment make them burnt out and how they then perceive their quality of care and how (or even if) they report adverse events. The authors were curious about burnout at the how nursing unit team level, not just individual. They had seen in previous research that it was suggested that it does.

Subjects
The subjects in this study were pulled from a 700-bed general hospital and a 600-bed university hospital in the Dutch-speaking part of Belgium. There was also a hospital group (comprised of 6 hospitals with beds ranging from 125-320) in the French-speaking part of Belgium. The total sample was 1201 nurses with a response rate of 56.5% of 116 units. The researchers chose 96 units that had a response rate of greater than 30% from its nurses, resulting in 1108 nurses. 20 nursing units were dropped because they did not have a high response rate.

Sample Characteristics
The nurses that participated in this study were those working in direct-care positions on medical-surgical, intensive care, medium care, emergency room, operation room and post-anesthesia units. These nurses worked both in pediatrics and adults. The information below are the means of the units where the sample size is N=96 (for the number of units that were included.

1. The average age was 38.5 years
2. The average number of years in nursing was 15.5 years
3. Average number of years on current unit was 8.9 years
4. 86% of the nurses were female
5. 60% of nurses worked 80% to full time positions
6. 76.6% of participants had bachelor’s degrees
Study Design

The design of this study was a cross-sectional survey. Nurses were invited by the coordinator/contact person at each hospital to complete a voluntary survey/questionnaire between June 2011 and June 2012. One hospital and the hospital group received the survey on paper while the other received it electronically. They were able to complete the survey at home or at their place of work. The researchers used a few different surveys to gather all the data they were looking for. The information received would give the researchers insight into the work environment, the status of nurse burnout and how often or how well patient adverse events were submitted.

Data Collection Method

The researchers used the Nursing Work Index Revised (NWI-R) that they adapted to look at three dimension of nurse-physician relations, nursing management at the unit level and hospital management and organizational support. These were rated on a 4-point likert scale from strongly disagree to strongly agree (Van Bogaert et al, 2014).

There were three instruments used to measure nurse work characteristics that allowed them to see perceived workload (six item intensity of labor scale), decision latitude(seven item scale about their ability to make decisions on own) and social capital (six item scale about their shared values and trust with their organization) (Van Bogaert et al, 2014). Each of these were rated just like the NWI-R scale with a 4-point likert scale.

The next item used was the Maslach Burnout Inventory Human Services Survey (MBI HSS). This item is used to look at the 3 aspects of burnout which are “emotional exhaustion”, “depersonalization” and “personal accomplishment” (Van Bogaert et al, 2014) using a 7-point likert scale. The nurse reported job outcomes were reported by asking questions about how satisfied the nurse is with their current job and if they have any intention to leave within the next year.

Finally adverse patient events were assessed by using a 7-point likert scale that determined how many times in the last year these events had happened. Adverse events were seen as “patient and family complaints, patient and family verbal abuse, patient falls, nosocomial infections and medication errors” (Van Bogaert et al, 2014).

Data Analysis Method

According to the article, data analysis was completed by using SPSS 20.0 for descriptive analyses. PROC MIXED and PROC NLMIXED with SAS 9.2 were used for the multilevel models (Van Bogaert et al, 2014).

Results

The researchers found that nurses rated nurse-physician relations, nurse management, decision latitude and social capital well. However hospital management, organizational support and workload were seen as negative. Only 10% of respondents were dissatisfied with their current job and had intent to leave within the next year.

Nurses saw their quality of care as favorable, while they did not feel the same way about hospital quality of care, patient and family complaints, patient and family
verbal abuse. Nurses felt they did a better job with falls and medical errors as compared to nosocomial infections.

The authors found a connection between workload, decision latitude and social capital with quality of care given. An association was found between frequency of adverse events and decision latitude, social capital, with patient/family complaints and between workload and patient/family verbal abuse. They saw that “nurse-reported frequency of patient falls, nosocomial infections and medication errors were predicted by depersonalization…in addition to nurse-physician relations and social capital respectively” (Van Bogaert et al, 2014).

Discussion

Overall this study had a lot of information to collect and assess. Using different surveys seemed to be helpful in gathering all the information that they wanted but ultimately confusing to combine them and figure out if there are relationships between them. They did however come up with some interesting information that adds to the existing field of study. They found that higher levels of burnout were associated with unfavorable job outcomes, patient and family complaints, and patient and family verbal abuse” (Van Bogaert et al, 2014). They believe that they have in fact confirmed a relationship between burnout, job outcomes, quality of care and patient satisfaction.

The were some limitations such as their common method bias because they chose the units that would be a part of the study based on their response rate. They think that performing the same study in different socio-economic contexts would only add to the field. The outcomes were nurse reported and ultimately are not hard, exact information about adverse events. We must take the information gather for what it is, nurse-assessed. It is how they perceived their jobs, their quality of care and what went wrong. The researchers believe that they add to the belief that hospitals should strive for Magnet designation so that not only to patients have a quality environment, but so do their nurses.
The longer the shifts for hospital nurses, the higher the levels of burnout and patient dissatisfaction

Citation
Witkoski-Stimpfel, A., Sloane, D., Aiken, L. (2012) The longer the shifts for hospital nurses, the higher the levels of burnout and patient dissatisfaction. *Health Affairs*. 31 (11) 2501-2509.

Purpose
The purpose of this study was to examine if there is a relationship between the length of a nurses shift and burnout and patient dissatisfaction. Long and or extended shifts for nurses are much more common than they used to be and the researchers want to see if this has some sort of effect on our nurses burnout level and if the patients are more or less satisfied with their care. The researchers believe that extended shifts may have an affect on patient care as well as the well being of nurses.

Subjects
The subjects used for this study were 22,275 registered nurses from the Multi-State Nursing Care and Patient Safety Study. The nurses involved were from California, New Jersey, Pennsylvania and Florida from 577 hospitals. There were at least 10 nurses involved from each hospital with an average of 39 nurses. They included nurses that had worked between 1-24 hours in their last shift, providing care to at least one but fewer than 20 patients. Only nurses in direct patient care roles were included.

Sample Characteristics
Nurses were divided into the categories of shift length. (8-9hours, 10-11 hours, 12-13 hours and >13 hours). The characteristics were as follows:
1. 65% worked in the 12-13 hours range
2. 68.6% of nurses that working 12-13 hours worked in a high technology hospital.
3. They were also mostly in teaching hospitals.
4. 67% of nurses working in 12-13 hours had bachelor’s degrees.
5. Most were white females, however it was mostly non-white males that worked >12hours.
6. In both med-surg and intensive care units, most of the nurses worked 12-13hours shifts.

Study Design
The study was a secondary analyses of cross-sectional data from three sources that were linked by common hospital identifiers. The Multi-State Nursing Care and Patient Safety Study surveyed the nurses in the four states from 2005-2008 for information about nursing shifts and burnout. They used the Hospital Consumer

**Data Collection Method**

The Multi-State Study asked nurses about shift length, working conditions, burnout, job satisfaction and intent to leave. A Likert scale was used to determine job satisfaction as well as aspects of the Maslach Burnout Inventory. HCAHPS allows patients to rate their care at a hospital. The questions used were global assessments of care, communication with doctors/nurses/staff, nursing care, hospital environment. This information is publically available. Lastly the American Hospital Association gave information about nurse staffing, teaching status, bed size etc.

**Data Analysis Method**

Data Analysis was done using statistical analysis software (SAS) 9.3. There were descriptive statistics done. The study set a significance level of p<0.05 for a two-tailed test.

**Results**

It was found that 80% of nurses reported that they were satisfied with their current schedule practices. They found that as burnout and intent to leave increased so did shift length. It was seen that “increases in shift length were associated with significant increases in the the odds of burnout, job dissatisfaction and intention to leave the job” (Witkoski-Stimpful et al 2012). The researchers found that the odds of burnout and job dissatisfaction were two and a half times higher for nurses worked longer shifts, than those nurses that worked 8-9 hours. A relationship was found between shift length and patient satisfaction and that was that as the number of nurses working longer shifts increased, patient satisfaction decreased. Although only 5% of the sample worked >13 hours per shift, it is estimated that an increase from 0-40% of these nurses would increase a 5% point increase in the patients that would give the hospital a lower rating.

**Discussion**

It is interesting to see that although the majority of nurses are satisfied with their length of shift and scheduling practices, they become more burnt out and are less satisfied with their jobs overall. It is thought that this is because nurses are happy that they can work less days a week, however the length of their shift is exhausting. This article also brings up the important fact that the length of your shift is unpredictable. Nursing is not like other jobs where you can leave when the clock hits 5pm. A nursing shift is not done until things are stable enough to give report for a few minutes. A nurse can be scheduled for a 12 hours shift but depending on what is happening at the end, the nurse could be stuck there for another hour or two, helping out, finishing charting etc.

As they stated, “fluctuations in patient needs and unanticipated staffing changes” can make your shift length unpredictable (Witkoski-Stimpful et al 2012). Nursing shifts
rotate to any time of the day as the work is never done an hospitals are a 24-hour operation. Switching back and forth between day and night shifts does not allow for an adequate sleep schedule and rest for our nurses. “Voluntary Overtime” sometimes does not feel that voluntary due to pressures from other staff members and management due to staff shortages.

Some limitations for this study included that it was a cross-sectional one. It was difficult to match up all the information for so many hospitals and nurses. Although it was only performed in four states, those four states represent 25% of the population in the U.S. The article calls for further monitoring of this county’s nursing staff to ensure adequate nursing work environments. The Joint commission issued a “sentinel event” alert in 2011 which asked “hospitals to intensify their efforts to monitor and address health care workers’ risk for fatigue cause by extended shifts” (Witkoski-Stimpful et al 2012).
The impact of nursing work environments on patient safety outcomes: the mediating role of burnout/engagement

Citation

Purpose
The purpose of this article was to look at the nursing work environment and how that impacts nursing burnout and then patient safety outcomes. The authors are well aware that there is a link between negative working conditions and employee stress, in any job, anywhere. However, in nursing it’s not just that the employee has a negative work environment, the way their perform their job is impacted and ultimately so are the people we’ve sworn to protect, the patients. The authors wanted to develop a model to see the relationship between the environment, nursing burnout and then the safety of patients.

Subjects
The subjects were pulled from the International Survey of Hospital Staffing and Organization of Patient Outcomes that was done in Canada, USA, England, Scotland and Germany. It was designed to look at the relationships between hospital work environment characteristics, nurse staffing and nurse and patient outcomes. This study only pulled the information from Canada (Ontario n=4,606 and Alberta n=3,991). It was performed in 292 acute care hospitals in Canada (only Ontario, Alberta and British Columbia that was not included).

Sample Characteristics
The characteristics were as follows:
1. Average age was 44
2. Average years of experience were 19
3. Average years worked in current hospital was 12
4. 98% were female
5. 48% had diploma educations with 28% bachelor’s prepared and only 2% masters prepared
6. 59% were full-time employees
7. 85% were permanent employees
8. 64% were in med/surg nursing, 12% in ICUs, 10% in OB, 6% in the OR, 4% in pediatrics and 4% in psychiatry.
Study Design
The design of this study was a cross-sectional analyses looking at survey data of nurses. The nurses reported on nursing work environment, burnout and patient safety outcomes. All were nurse-assessed. They received the questionnaires in the mail in 1998 with anonymous replies. The authors were looking to test their hypothesized model of the Nursing Worklife Model that physically shows the link between work environment, burnout and patient outcomes. They wanted to see if the factors from the surveys matched that of their model.

Data Collection Method
In the survey that the authors pulled their information, they used a modified version of the Nursing Work Index Revised (NWI-R) which was called the Practice Environment Scale of Nursing Work Index (NWI-PES). This version used subscales that imitated five aspects of professional nursing work life. It was a 4-point likert scale ranging from strongly disagree to strongly agree. The other survey used was the Maslach Burnout Inventory—Human Service Scale that looks at the 3 subscales of burnout which include emotional exhaustion, depersonalization and personal accomplishment. They are rated on a 7-point frequency scale of how often they see or feel something.

Data Analysis Method
Analysis was done using means, standard deviations and Cronbach’s α reliability estimates. They used structural equation modeling to test bother Lake’s structure of NWI-PES and the fit between their “hypothesized model and the data and the magnitude of the direct and indirect effects within the model” (Spence-Laschinger and Leither, 2006).

Results
The study found that there was a highly correlated relationship between emotional exhaustion and depersonalization with an r=0.71. The strongest correlations for adverse events are with staffing, emotional exhaustion and depersonalization. The most frequently seen adverse events were patient complaints, nosocomial infections and then followed by falls and medication errors.

Discussion
This study had some limitations due to it being out of the country and that they only examined the data from their country. It would have enriched their data to include all countries examined to give it good external validity. It was weak in its analyses because it was finding relationships between the 3 aspects of burnout that have been studied over and over again and have been confirmed to be related in many studies. They did well in developing a model for their hypothesis, but again could have been enriched with data from other countries. As with most studies examining burnout out, it is indicated to improve the nursing work environment to reduce burnout in nurses as well as to decrease the adverse patient outcomes. Providing nurses with a safe and supportive
environment should in turn do the same for the patients. They do suggest that expanding nursing management and leadership should increase their visibility on the unit and encourage and support nursing staff.
Mackenzie White
Lit Matrix #8

Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction

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**Citation**

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**Purpose**
The purpose of this study is to determine if there is a relationship between “the patient-to-nurse ratio and patient mortality, failure-to-rescue (deaths following complications) among surgical patients, and factors related to nurse retention” (Aiken, Clark, Sloane, Sochalski and Silber 2002). The authors believed that they could find a link between staffing ratios, burnout and how that relates to job satisfaction and patient mortality.

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**Subjects**
The subjects used in this study were pulled from 168 hospitals (after a start number of 210) in Pennsylvania. Only 168 hospitals were used because they had discharge data available when the remaining 42 did not. Information about the hospital characteristics were pulled from the American Hospital Association Annual Survey and the 1999 Pennsylvania Department of Health Hospital Survey. Some hospitals were excluded due to minimal response rate from nurses or from inability to match information between nursing and patients.

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**Sample Characteristics**
The characteristics for the nurses included:
1. 94.1% were female
2. 39.6% had bachelor’s degrees or higher
3. 13.8 years was the average time spent working as a nurse
4. 31% worked in med/surg, 19.6% in ICUs, 9.8% in the OR and 39.6% in other areas.
5. 43.2% responded with high emotional exhaustion
6. 41.5% were dissatisfied with their current job.

The patient information included in this study showed that 47.6% of men had complications, 8.4% of those had death within 30 days of admission. Data also showed that the patients with complications had higher rates of comorbidities.

Full characteristics are available in the tables shown in the article itself.
Study Design

The study was a cross-sectional analyses that used information from April 1st 1998 until November 30th 1999. Information was pulled from different sources to obtain information about nurses, patients and hospital characteristics. Statistical analyses were done to determine any and all relationships.

Data Collection Method

Nurses were provided with a questionnaire that asked questions about demographic information, workload, job satisfaction and job-related burnout. The instrument used was not indicated in the study. We don’t like to assume, but one would think that some sort of burnout tool was used. This is a limitation of the study if they do not show what was used. All patient information and discharge data was obtained from the AHA survey to see outcomes.

Data Analysis Method

The Analysis method used descriptive statistics for the sample. Logistic regression models were used. All were done using STATA version 7.0 and a p<0.05 was considered statistically significant.

Results

50% of hospitals had 5:1 nurse to patient ratios or lower. Those hospitals discharged 65.9% of the patients and had 64.4% of the nurses surveyed. The information gathered showed that increasing the patient load by 1 more increased nursing burnout by 23% and job dissatisfaction by 15%. This would say that a patient to nurse ratio of 8:1 would increase the risk of nurse burnout by 2.29 times.

As for patient mortality, the addition of 1 patient to an assignment would increase the patient mortality risk by 7%. The researchers had said that by adding additional registered nursing staff, you can decrease your patient mortality, especially in those patient populations who are at higher risk for, and develop complications. The researchers stated that “staffing hospitals uniformly at 8 vs. 4 patients per nurse would be expected to entail 5.0 excess deaths per 1000 patients and 18.2 excess deaths per 1000 complicated patients” (Aiken et al. 2002).

Discussion

The results of this study imply that we can decrease nurse burnout by making our patient to nurse ratios smaller. In turn, if our ratios are smaller, the less mortality we will have in uncomplicated and complicated patients. It is thought that by increasing the amount of supervision of registered nurses allows for better care and nursing can monitor the status of their patient assignment much more closely. It is logical to think that the less you have to think about allows you to focus more clearly on your assigned tasks. Although some are better than others at multi-tasking, anyone can be more successful and
perform their job better with less work. Not only does increased staffing reduce burnout, it provides better care for patients.
A human factors framework and study of the effect of nursing workload on patient safety and employee quality of working life

Citation


Purpose

The purpose of this study were “(1) to measure each of the three types of workload experienced nurses at two paediatric hospitals, and (2) to assess whether and which measures of workload were related to three important outcomes: nurses’ self-reported job dissatisfaction and burnout, and the perceived likelihood of an error occurring during medication administration” (Holden, R.J., Scanlon, M.C., Patel, N.R., Kauhal, R., Escoto, K.H., Brown, R.L., Alper, S.J., Arnold, J.M., Shalaby, T.M., Murkowski, K. & Karsh, B., 2011). In other words the study was to assess the relationship between a nurses workload and burnout, dissatisfaction with their job and if they felt they were likely to make a medication error.

Subjects

The subjects for this study were obtained by asking for voluntary participation from full-time RN’s. Those that did not have direct patient care were excluded. They were given the surveys during staff-meetings, in-services etc. with specific ID numbers. They were given $5 cash incentive for participation. Reminders were sent out after 1 week and a follow up survey was given 7-10 days afterward (Holden et al., 2011).

Sample Characteristics

The sample characteristics were presented in a table that split up the respondents from hospital A and hospital B. Hospital A had 121 responses where hospital B had 78. One would find that the majority 97% (A) and 96.1% (B) were female and white, no Hispanic. The majority of respondents were between the ages of 18-29 and working mainly day shifts. Hospital A’s nurses worked an average of 32.9 hours per week where B worked 37.3 hours. Nurses in hospital A have been at their job an average of 8.6 years and 8 years on their unit. Where hospital B have worked about 4.5 years at their job and 3.9 years on their unit. Hospital A’s nurses had been a nurse for about 11.5 years where hospital B’s average years as a nurse were 7.8 years (Holden et al., 2011).

Study Design

This study was designed as a cross-sectional survey of nurses working in two separate “academic tertiary care paediatric hospitals” (Holden et al., 2011). Hospital A
was set in the Midwest, where hospital B was in the south. The authors used what they called “a multi-level human factors framework of nursing workload” (Holden et al., 2011) to show how the demands and resources placed on nurses effects their workload and what the outcomes would be in terms of nurse-assessed burnout, job dissatisfaction and medication errors.

Data Collection Method
The nurses were asked in their surveys to respond based on their workload and work-life within the past thirty days. The items used to survey were Likert-type questions with answers ranging from 0-6. The survey asked various questions about their nurses workload based on their job level, their unit level and task level. These questions were modeled after the NASA-TLX and SWAT questionnaires (Holden et al., 2011). They were then asked questions about job dissatisfaction, burnout and medication error and how they thought they effects patient outcomes (Holden et al., 2011).

Data Analysis Method
The researchers used their multilevel logit model that had “exogenous variables” that measured “unit-level, general job-level, specific job-level, task-level internal and task-level external workload” (Holden et al., 2011). The “endogenous variables were job dissatisfaction, burnout and medication error likelihood” (Holden et al., 2011). Their model was made using MPlus software and statistical adjustments were made for sample characteristics. An alpha criterion of 0.05 was considered for this study (Holden et al., 2011)

Results
The results of this study found that workload measures were positively inter-correlated across the levels and that job dissatisfaction and burnout were significantly correlated but neither were associated with likelihood of medication error. The results of the study have shown that there is a positive relationship between external mental workload and the likelihood of a medication error. Job dissatisfaction was found to be positively associated with unit-level staffing. The authors found that burnout had a positive relationship with unit-level workload and external mental workload (Holden et al., 2011).

Discussion
The study has shown a couple of important factors to keep in mind with burnout. It has shown that there is a relationship between burnout and the workload put on nurses. Not just at their task-level or job-level but at the unit-level as well. This shows that it is not necessarily associated with just the nurse’s perception of their individual job, but that of the whole unit environment around them. The researchers found that there is the relationship between workload and likelihood of a medication error which would suggest that decreasing the workload for nurses would decrease the likelihood that an error would occur. The researchers are suggesting that when taking into account the workload of nurses that there are other factors to consider instead of just census and number of staff members. Continued or increase in teamwork and communication were suggested by the
authors to help decrease perceived workload if adding staff isn’t necessarily achievable. The researchers advised to continue to develop research on this topic and to broaden the types or workload (Holden et al., 2011).