Nurse Leader Initiatives to Decrease Job Stress on the Acute Care Unit

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Abstract

Nurses are expected to provide high quality, safe healthcare in working environments where limited resources and increasing responsibilities are common. An imbalance between providing high quality care and managing or minimizing the assault of stressors can lead to increased job stress. Nurses on the Acute Care Unit (ACU) of a Midwestern, rural hospital utilized the Nursing Stress Scale (NSS) developed by Gray-Toft & Anderson (1981) to analyze aggregated mean data self-reported scores for job stressors before and after focused change initiatives. Nurses selected and led change initiatives for the top five scoring stressors that nurses concurred were modifiable using interprofessional interventions. Multidisciplinary teams collaborated to choose educational sessions, updated resources, and revised communication tools in an attempt to decrease job stress on the unit. The results of the second NSS when compared to the first survey overall demonstrated decreased stress mean scores in six of the seven subscales. The specific nurse led unit initiatives decreased self-reported job stress in four of the five areas. This project found encouraging results in decreasing job stress by implementing nurse led change initiates on the ACU.

Keywords: nursing, job stress, leadership, change initiatives

1. Introduction

1.1 Introduce the Problem

Job stress in nursing has been studied in many countries for over half a century (Qin, Zhong, Ma, & Lin, 2016). Job stress is not inherently deleterious, and some job stress can positively influence performance. Nursing is the largest faction of healthcare providers. Job stress is being recognized nationally as a challenge for the nursing profession (Qin, et al., 2014). As authors Nishshanka, Akilendran, & Muraleeswaran (2016) and Zeller & Levin (2013) explain, job stress is intrinsic to nursing and it is currently recognized as a challenge for the nursing profession. Nurses in hospitals are exposed to high levels of occupational stress resulting from heavy workloads, extended working hours and time constraints (Tsai, & Liu, 2012). The current healthcare environment requires nurses to provide high quality patient care services with seemingly fewer resources then in the past which can potentially lead to physical, social, and mental

job stress (Thian, Kannusama, & Klainin-Yobas, 2013). Nursing job stress is predicted to increase in the coming years, a trend that is important given the effect job stress can have on the health and safety of nurses and the patients under their care (Zeller & Levin, 2013).

1.2 Explore Importance of the Problem

Job stress, also referred to as work stress or occupational stress, has been defined by the National Institute for Occupational Safety and Health (NIOSH) (1999, p. 6) as "the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker." A large number of studies on nursing job stress have been conducted. Studies have identified common sources of stress at work including: shift work, long working hours, lack of control, conflicting demands, bad relations with colleagues, low pay, and poor working environment (Qin, et al., 2014; Thian, Kannusamy, He, & Klainin-Yobas, 2015; Tsai, & Liu, 2012). As Jose and Bhat (2013) found, increased workload among nurses, growing occupational stress, inability to cope with stress on the job, lack of social or family support, and declining job satisfaction were the major concerns in nursing professionals. The 2011 Occupational Health and Safety Survey by the American Nurses Association (ANA) found that the main concern for nurses in regards to health and safety in the working environment is the acute and chronic effects of stress.

1.3 Describe Relevant Scholarship

The effects of job stress were studied by Khamisa, Oldenbury, Peltzer, and Ilic (2015), in which the authors found that staff issues, including poor staff management, resource inadequacy, and security risks in the workplace, were closely associated with burnout and likely compromising productivity, performance, and quality of patient care. Job stress can result in a loss of compassion for patients and increased incidences of practice errors, in turn negatively impacting quality of care with direct and indirect implications on the delivery of care (Sarafis et al., 2016). The financial impact of nursing stress is also well documented, including links to increased absenteeism, workplace injuries, nursing turnover, inefficiencies in health care, nurse fatigue and burnout, and clinical errors, and conversely, decreasing productivity (Letvak, Ruhm, & Lane, 2011; Zeller & Leven, 2013).

Nurses on the Acute Care Unit (ACU) of a rural, Midwestern hospital conceptualized the theoretical works of Selye (1956). Nurses concurred that some job stressors were unavoidable and likely increased work performance. In contrast, high levels of job stress were linked to negative consequences, and of principal concern, could adversely affect patient care and safety. In response, nurses took action. As the IOM (2010) explains, nurses should be full partners in redesigning healthcare utilizing data collection and improvement infrastructure.

Kotter's 8-Steps to Accelerate Change (2012) model was used to manage enhanced change on the ACU. Following this framework, engaged unit nurse leaders chose to implement initiatives designed to build resources for individual nurses to cope or decrease job stress. As Roberts and Grubb (2014) explained, initiatives aimed to reduce stressful working conditions is critical to the reduction and prevention of job stress among nursing professionals.

Importantly, the Kotter model (2012) was easy to follow, provided change structure, facilitated collaboration with innovation, and recognized the need to incorporate opinions from staff and other stakeholders to coordinate and sustain unit change (Small et al., 2016). The nurse led initiatives to decrease job stress reported in this study were expected to have a favorable effect because the initiatives were ACU specific following a survey analysis, and secondly, the initiatives were deployed by the unit staff with management approval.

1.4 State Hypotheses and Their Correspondence to Research Design

The three aims of this study were: 1.To identify the most prevalent self-reported nurse stressors on the Acute Care Unit (ACU) of a Midwest, rural hospital unit using the Nursing Stress Scale (NSS); 2. To implement nurse led initiatives on the ACU over one year to intentionally decrease the most prevalent self-reported nurse stress items from the NSS modifiable by nursing unit staff; and 3. To retest self-reported nurse stressors on the ACU using the NSS following the nurse led change initiatives to assess for decreased nurse stressors when comparing the results of survey one to survey two.

2. Method

2.1 Identify Subsections

This quality improvement study was an observational, descriptive, pre-post survey on the Acute Care Unit (ACU). The ACU is a 46 bed medical and surgical unit in a rural, Midwestern hospital. The instrument used in this study was the Nurse Stress Scale (NSS) (Gray-Toft & Anderson, 1981) with 10 demographics. All ACU nurses were invited to participate in the survey with 32 responding in the first survey and 21 responding to the second survey

2.2 Participant (Subject) Characteristics

Demorgraphic data collected include gender, educationl level and age as shown in Table 1. The data were collected in November 2016 and February 2018 using a confidential Survey Monkey link delivered to the email accounts of all eligible unit nurses for both points of data collection.

Table 1: Demographicso of respondants

	Responses	Female	Male	Diploma	ADN	BSN	MSN or higher	Age 20 to 27	Age 28 to 35	Age 36 to 43	Age 44 to 55	Age 56+
1st Survey	32	31	1	1	18	11	2	17	5	2	5	2
2nd Survey	21	20	1	1	9	9	2	8	7	2	2	2

2.3 Sampling Procedures

The data were collected in November 2016 and February 2018 using a confidential Survey Monkey link delivered to the email accounts of all eligible unit nurses for both points of data collection. The original survey in November 2016 had 32 respondents of 42 employed nurses with the response rate of 76%. The second survey in February 2018 had 21 nurses respond out of 30 employed nurses with a response rate of 70%. IRB approval was obtained from the Midwestern hospital where the study took place and from the local university.

2.3.1 Sample Size, Power, and Precision

Sample size was 31 in the first survey and 21 in the second survey. The samples did not differ from the known population of the ACU unit.

2.3.2 Measures and Covariates

The NSS is a 34 item questionnaire with seven subscales designed to measure job-related stress for nurses. The NSS is a Likert-type instrument with each item scored 1 (never), 2 (occasionally), 3 (frequently) to 4 (very frequently). The NSS has seven subscales which include death and dying (7 items), conflict with a physician (5 items), inadequate preparation (3 items), lack of support (3 items), conflict with other nurses (5 items) workload (6 items) and uncertainty concerning treatment (5 items). Scores on the NSS are summed, with higher scores indicating greater levels of stress. Initial testing of internal consistency found a coefficient of 0.89 and that nursing stress affects job satisfaction, staff turnover, and patient care (Gray-Toft, & Anderson, 1981). Subsequent studies have used the NSS reporting well-developed instrumentation according to the guidelines of Nunnally (1978). 2.3.3 Research Design

2.3.4 Experimental Manipulations or Interventions

After the NSS results were tabulated the nurses on the ACU gathered to review the strategic vision and enlist team initiative leaders (Kotter, 2012). The hospital vision was the overarching decree. The focused change initiatives were selected by the unit nurses taking into consideration what was assessed to be the most modifiable job stressors reported in the NSS items alongside the stressors the nurses felt the most empowered to be able to initiate and sustain unit change. For example, some stressors were reasoned to be better influenced by change initiatives from administration such as staffing issues and computer maintenance.

The first item on the NSS for a focused nurse led change initiative was: feeling helpless in the case of patient who fails to improve. The unit nurses, in accordance to a hospital wide initiative, decided to recommend structured debriefing after Rapid Response Team (RRT) calls and patient code situations. Additionally, a more detailed interdisciplinary approach was activated in which the patient nurse, unit charge nurse, and multidisciplinary personnel such as Respiratory Therapy, Critical Care Nurses, and Case Management communicated on best patient care practices needed in that particular situation.

The second and third nurse led change initiatives were addressed in a similar manner. The second item on the NSS was: the death of a patient. For this initiative, unit nurses decided to seek the educational services

of a hospice specialty nurse to provide continuing education. To entice participant's hospital wide, food was served. Additionally, nurses openly volunteered to share professional experiences in monthly unit meetings and disperse open access research articles for journaling. The third topic: criticism by a physician was addressed with the expertise of a recruited, published speaker for Crucial Conversations in a half day seminar with role playing and personal reflection.

The fourth unit focused initiative was: fear of making a mistake in treating a patient, which initially employed services hospital wide with the reinforcement to utilize Rapid Response Teams (RRTs). Staff nurses confessed that their feared the negative judgement of incompetence if they called for RRT assistance. Two other initiatives were enacted with the fourth initiative. The first incorporated revisions in the Situation-Background-Action- Recommendations (SBAR) template communication hand off between staff nurses to better meet unit needs. And secondly, the incident reporting organizational process. The ACU manager stressed that reported incidents are not equated to incompetence, personal criticism, or punitive repercussions. Contrary, reporting incidents is a hospital-wide essential systematic process to better ensure patient safety and quality health care outcomes.

The fifth and final unit focused initiative was: being asked a question by a patient for which I do not have a satisfactory answer. This initiative was addressed using face to face unit meeting times designated for physician discussions with the unit nurses. More specifically, physicians were asked to attend scheduled unit meetings and openly communicate with nurses their specific patient care partialities in order to provide better patient care while enlightening the unit nurses on how to investigate orders, understand new protocols, and be better prepared to communicate with physicians on the floor during patient care rounding.

(1)

3. Results

3.1 Recruitment

The data was collected in November 2016 and February 2018 using a confidential Survey Monkey link delivered to the email accounts of all eligible unit nurses for both points of data collection.

3.2 Statistics and Data Analysis

Analysis of data and the reporting of the results of those analyses are fundamental aspects of the conduct of research. Accurate, unbiased, complete, and insightful reporting of the analytic treatment of data (be it quantitative or qualitative) must be a component of all research reports. Researchers in the field of psychology use numerous approaches to the analysis of data, and no one approach is uniformly preferred as long as the method is appropriate to the research questions being asked and the nature of the data collected. The methods used must support their analytic burdens, including robustness to violations of the assumptions that underlie them, and they must provide clear, unequivocal insights into the data.

Data was analyzed using descriptive statistical analysis in SPSS v25. Measures of central tendency were conducted including mean, standard deviation and variance. All 34 NSS item responses were analyzed for both survey one and two. T-test was used to analyze the differences in means of groups with significance level $p > 0.05$ for self-reported job stress on the ACU. Data on the NSS one and two surveys showed the test-retest reliability of 0.81 and 0.77 and the internal consistency for the total scale of 0.89 to 0.87

respectively.

3.3 Ancillary Analyses

The mean for the 34 items on the first survey was 2.04 and 2.01 for the second survey. The specific nurse led change initiatives decreased self-reported job stress in four of the five survey items. These survey items included: feeling helpless in the case of patient who fails to improve (decreased 0.16), death of patient (decreased 0.13), fear of making a mistake in treating a patient (decreased 0.28) and being asked a question by a patient for which I do not have satisfactory answer (decreased 0.21). Interestingly, the mean score of the death subscale decreased from 2.13 to 2.01. Specifically, listening or talking to a patient about his/her approaching death decreased 0.35. The subscale of physician conflict with a physician decreased from 2.01 to 1.99, however conflict with a physician and criticism by a physician both increased by 0.11 and 0.22 respectively.

3.4 Participant Flow

The response rates for both the initial survey and secondary survey were high. Overall, 76% of those who completed the second survey had completed the first survey. Those who complete the second survey were likely new nurses on the ACU.

3.5 Intervention or Manipulation Fidelity

Interventions were designed by the nurses of ACU. The interenvetions were presented at unit meetings, through emails and postings on the unit. The majority of the intereventions were done during mandatory unit meetings. The intereventions were aimed at reducing identified stressors of the staff on the unit.

3.6 Baseline Data

Table 2 identifies the five stressors that were chosen by nursing leaders on the ACU to decrease. Nurses chose the stressors to focus on based on the impact that could bd made to decrease the stressors.

Table 2: Change Initiative Scale Items Focused on by Nursing Leaders

Item	Mean Initial Survey	SD Initial Survey	Mean Second Survey	SD Second Survey	Change in Mean
Feeling helpless in the case of patient who fails to improve.	2.16	0.51	2.00	0.45	-0.16
The death of a patient	2.13	0.65	2.00	0.55	-0.13
Criticism by a physician	2.03	0.53	2.14	0.48	0.11
Fear of making a mistake in treating a patient	2.47	0.91	2.19	0.93	-0.28
Being asked a question by a patient for which I do not have a satisfactory answer	2.31	0.73	2.10	0.54	-0.21

Be sure that baseline demographic and/or clinical characteristics of each group are provided.

3.6.1 Statistics and Data Analysis

The participants were a convenience sample of nurses on the ACU who complete the survey. The second survey invited all nurses on the ACU to participate, however not all nurses had complete the initital survey.

3.6.2 Adverse Events

No adverse events occurred

4. Discussion

This project aimed to identify the stressors of the ACU using the NSS, develop intentional nurse led initiatives to address significant unit stressors that were modifiable by nursing staff, and ultimately decrease self-reported stressors on the unit. As the data demonstrates, the unit self-reported stress mean scores were discovered, analyzed and decreased in six of the seven NSS subscales. Additionally, the specific nurse led change initiatives decreased self-reported job stress in four of the five survey items.

A guiding coalition to explain some of this projects strengths was the interconnected unit nurse leaders willing to persuade others to adopt new practices (Small et al., 2016). The ACU coalition consisted of the nurse director, nurse educators, unit charge nurses and bedside nurses who collaborated in order to organize change, coordinate unit change initiatives, and communicate change. A key strategy in this project was the inclusion of floor nurse ideas and perceptions of stressors and interventions needed to minimize or decrease job stress. Floor nurses are the frontline staff to seeing and handling job stresses. Nurses need to be empowered to find solutions to job stressors that they encounter on a daily basis.

Findings suggested that there are several components that cause stress. Stress is inherent to nursing and not all stress can be prevented. The top ranking scores on both surveys can be summarized to include the stressors of computers, insufficient time on task, staffing, lack of emotional support, fear of patient errors, and patient suffering. These results align with published research studies.

The project data of this study demonstrates that overall self-reported stressors on the unit decreased on six of the seven subscales. An important NSS subscale revealed an increase in job stress, being conflict with other nurses ($r = 0.88$, $p = .05$). This finding is alarming, and can be attributed to factors such as the need for more caring nurse to nurse behaviors, unit staffing turnover, lack of more experienced nurses to precept new nurses, and that at the time the second survey was conducted the hospital acuity spiked causing nurse shortages and unusual demands for nurse floating to other units. This subscale was also the lowest ranked in stress levels on both the first and second survey but did increase to the second survey. Additionally, this project data revealed that of the nurse led unit initiatives job stress was decreased in four of the five areas. The area of concern is criticism by a physician. Increased job stress in this scale item is likely due to new nursing staff, lack of interdisciplinary activities, and the spiked hospital acuity at the time of the second survey leading to less time on task for all health care professionals.

This study has created a culture of change. Nurses have been empowered to create change by asking research questions validated by evidence for manageable unit change projects. This project set an impetus for empowering staff nurses at the bedside to reflect on practices and seek evidence based interventions plausible for unit application. Interestingly, the current bonus system at the hospital requires staff nurse to

analyze a research question and implement projects. An unintentional outcome of this study is that it seems to be serving as a springboard to empower other nurses to implement research projects and disseminate findings. For example, a cross-sectional hospital study is underway to investigate job stress for charge nurses in all units of the hospital.

This study used a convenience sample of a 46 bed unit in a rural, small hospital. The results of this study may not be generalizable to other similar medical surgical units. Results of top stressors will likely vary depending upon unit and hospital unique environmental stressors. More research studying interventions to decrease nursing job stress in hospital units following nurse led change initiatives is needed.

5. Conclusion

It is important for nurses, administration, and hospitals to evaluate job stressors within the workplace. The daily professional job of nurses has unique characteristics which can attribute to mental, physical and emotional job stress. Job stress has cumulative, deleterious effects. Given that nursing job stress is recognized nationally as a challenge for healthcare, multidisciplinary initiatives to address unit specific stressors is needed. Some job stressors are manageable and can be decreased by interventions. Nurse leaders are strategic in analyzing unit stressors, implementing change initiatives, and evaluating outcomes to minimize job stress. Nurses need to have the tools to handle stress and be empowered to create change.

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