

The Correlation of Resilience Factors with Job Satisfaction in Emergency Room Nurses

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Abstract

Background: The global nursing shortage continues to increase exponentially for many reasons such as the rise in the aging population, lack of educators, and high turnover rates. Emergency Room (ER) nurses practice in environments that are intense and continuously changing. They bear witness to inconceivable violence, emergencies, illnesses, and tragedies, putting them at risk for burnout, depression, job dissatisfaction, absenteeism, and increased attrition. Despite the many challenges faced by emergency room nurses, some develop resilient coping strategies that enable them to deal with taxing work experiences in a positive way. Describing factors associated with resilience that correlate with increased job satisfaction may help employ and retain valuable nursing professionals as well as build and support resilience.

Methods: A cross-sectional descriptive correlational research design was used to describe the relationship between resilience and job satisfaction among emergency room nurses. Data was drawn from analysis of self-reported questionnaires which included three sections of; demographic data, Index of Work Satisfaction Questionnaire Part B and Connor-Davidson Resilience Scale. Of the 300 Emergency nurses that were invited to participate in the study, 116 responded however only 101 completed the survey and were included in the statistics. The response rate was 30%.

Results: The analysis revealed a strong correlation coefficient of $r(99) = 0.761$ ($P < 0.01$) for resilience and job satisfaction. The correlation coefficient was within the medium effect size range of approximately 0.3 and the variance (r^2) was .578. Therefore, slightly over 50% of the nurses' job satisfaction was explained by the nurses' resilience scores.

Conclusion: The study findings suggest that ER nurses are resilient and satisfied with their jobs. Resilience is a characteristic that can be not only be taught and enhanced with practice but also a trait that can be possessed. Appreciation of the contributing factors to resilience, individual traits that foster resilience and approaches to build resilience can help in recruiting and retaining nurses. The enhancement of resilience and the promotion of staff wellbeing are not only valuable to healthcare organizations but also to the nurses and the patients they care for.

Background

Emergency Room (ER) nurses practice in environments that are intense and continuously changing. The unstructured and erratic environment of the emergency room invites discord from a multitude of contributing factors such as short-staffing, cost constraints, high patient acuity, violence, continuing rise in the number of ER patients, the need to react appropriately in rather variable circumstances, controversies in end-of-life care, and unpredictable levels of care [1-7]. In the United States, the Emergency Medical Treatment and Labor Act (EMTALA) separates the care provided in the emergency room from all other health care areas. In this particular environment, providers must care for every patient by law, even when the number of patients and intensity of patient care exceeds the service capacity for the emergency department often times leading to burnout and increased stress [8]. Burnout scores are highest among nurses than any other healthcare profession, leading to the delivery of suboptimal patient care and the loss of highly skilled nurses as they leave the profession of nursing [9-16]. High-stress areas such as the critical care environment report the greatest levels of nursing burnout overall [17-20]. Critical care nurses are found to be susceptible to burnout but emergency nurses, even more so, as this environment is defined by unpredictability, overcrowding, and endless encounters with an extensive range of diseases, injuries, and distressing situations [21].

Purpose

The abundance of stressors on the critical care nurses of the emergency room have lasting effects, noted in their astonishing low retention rates. In 2016 and 2017, emergency rooms cumulatively turned over 40.2% of their nursing staff and consistently report turnover rates higher than the national average [22]. Spiraling rates of burnout, turnover, and shortages of critical care staff combined with lower amounts of employee engagement wreak havoc on the quality and safety of patient care as well as the financial and overall stability of the health care system [9,10,12,23-26].

Health-care organizations spend a significant amount of money to recruit, train, and pay new nurses [11,27,28]. Experienced nurses walk away from their job, taking with them their many years of experience

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and expertise leaving a significant void in the practice. Consequently, productivity declines and the financial repercussions can be enormous. The price of turnover in newly licensed nurses is estimated to be \$856 million for organizations and can vary between \$1.4 billion and \$2.1 billion for society [29]. The costs to replace an experienced nurse would be even higher and therefore even more damaging financially for a healthcare organization. With the dwindling supply of nurses unable to fulfill the current demand, it is imperative we identify ways to retain all nurses already in the workforce. Placing an emphasis on retaining nurses that have extensive training and experience, such as those employed in the emergency room, may result in greater financial dividends for the overall healthcare system.

To replace a registered nurse, the cost can be as high as \$60,102 according to the 2009 Retaining Experienced Nurses Research Initiative sponsored by the Robert Wood Johnson Foundation [30]. Others have noted the costs associated with nurse turnover to be greater. According to a Consumer Price Index cost assessment, the average cost of replacing a registered nurse with experience was found to be as high as \$67,000 with the total cost to turnover these nurses to be greater than \$6 million [31]. These numbers would be significantly higher today, over ten years later, considering the cost of inflation. The financial losses to an organization to retrain a specialty nurse have been projected to be as much as \$80,000 [32]. Although there is some variability in the exact cost to replace a registered nurse, it is hard to argue that there is a significant financial detriment for healthcare organizations as they work to rebuild their nursing staff. Therefore, the prudent management of retention should be a focal point for healthcare administrators, particularly given the high cost of turnover. As a result, it is essential that we identify what characteristics of the critical care nurse enable them to stay in the environment. What qualities do some nurses possess, that supports and empowers them in challenging situations? Resilience is one of these characteristics. Resilience is the ability to adapt to stress in the workplace and has a direct link to positive emotions in challenging situations [33-34].

Despite the many challenges faced by emergency room nurses daily, some nurses develop resilient coping approaches that enable them to deal with taxing work experiences in a positive way [35-40]. Describing factors associated with resilience that correlate with increased job satisfaction may help retain valuable nursing professionals. In addition, the correlation between job satisfaction and resilience may provide the answers to how we can develop strategies to deal with and prevail in arduous situations. Taking a positive view of why some nurses thrive in an emergency setting despite an environment that has strong potential for discord will provide new knowledge to enhance the profession of nursing. Additionally, being aware of the contributing factors to resilience as well as tactics to build and support resilience can help in employing and retaining nurses [35]. The natural tendency of humans to focus on the negatives must be replaced with understanding how individuals are able to adjust positively in stressful situations in order to provide important guidance for developing effective interventions. The relationships between resilience and job satisfaction have not been studied in the ER setting. The purpose of this research study was to examine the scores of resilience and job satisfaction among emergency room nurses to discover if a relationship exists between them. In addition, this study measured job satisfaction and resilience scores to see if they differed by demographic category. The following research questions were posed: 1) Is there a correlation among Emergency Room Nurses scores in resilience as measured by the Connor Davidson Resilience Scale (CD-RISC) and job satisfaction scores as measured by The Index

of Work Satisfaction (IWS) Part B? 2) Do the demographic variables have a relationship with resilience scores? and 3) Do the demographic variables have a relationship with job satisfaction scores?

Methods and Materials

A descriptive, correlational research design was used to investigate the relationship between resilience and job satisfaction among emergency room nurses. A convenience sample of emergency room nurses providing direct patient care in the emergency room of three hospitals in New England was used for this research study. Using the G*Power analysis program to demonstrate a statistically significant finding, it was determined that the minimum sample size of 82 respondents was recommended (α 0.05, power 0.80, and an effect size 0.30) for this study. Of the 300 Emergency nurses that were invited to participate in the study, 116 responded to the study however only 101 completed the survey and were included in the statistics. The response rate for this study of 30% was similar to other online surveys.

Research Instruments

Three self-administered questionnaires were used to collect data from participants regarding demographic information, resilience, and job satisfaction. The CD-RISC was used to measure the level of resilience of emergency room nurses [33]. This self-reporting scale contains 25-items which consist of 5 factors: personal competence, high standards, and tenacity; trust in one's instinct, tolerance of negative effects, and strengthening effects of stress; positive acceptance of change and secure relationships; control; spiritual influences. Each of the 25 items are rated on a 5-point Likert scale, carrying a five-point range of responses from 0 to 4 (range 0 to 100), with 0 corresponding to "not true at all", to 4 corresponding to "true nearly all of the time". Higher scores reflect greater resilience. The Cronbach's alpha for the overall score was 0.92 [33]. The IWS Part B was used to measure job satisfaction in Emergency Room nurses [41]. The IWS Part B is an attitude survey that measures overall satisfaction with the nurse's current job and consists of 44 items, positively and negatively worded, and scored on a seven-point scale. Answers can range from 1 = agree to 7 = disagree. Six components of satisfaction are measured and have all met statistical criteria for inclusion: pay, autonomy, task requirements, organizational policies, professional status, and interaction. The range of possible total scores is 44-308. Higher scores indicate higher job satisfaction. Cronbach's alpha for the IWS scale is 0.85 [41].

Results

Table 1 shows the demographic characteristics of the study participants. Descriptive analyses were conducted to describe the demographics of the 101 participants employed full-time, part-time, or per-diem in a hospital setting. The majority of the sample was female (86.14%). Ethnicity identified by participants was 84.16% white/Caucasian, 3.96% Hispanic/ Latino, 0.99% Asian/ Pacific Islander, and 10.89% other race. The majority of participants reported being married (58.42%), followed by being single (25.74%), and divorced (9.90%), separated (4.95%), and widowed (0.99%). A bachelor's degree was identified most frequently as the highest level of education (75.25%), followed by associate/diploma (13.86%), and masters (10.89%). The majority of participants reported that they did not hold a specialty certification (66.3%), had no desire to leave their current job within the next year (84.2%), and were members of the Emergency Nurses Association (ENA) (59.4%).

Variable		N	%
Gender	Female	87	86.1
	Male	14	13.9
Ethnicity	White/Caucasian	85	84.0
	Hispanic/Latino	4	4.0
	Asian/Pacific Islander	1	1.0
	Other	11	11.0
Age	20-24	1	1.0
	25-34	21	20.8
	35-44	17	16.8
	45-50	19	18.8
	51-55	24	23.8
	55-60	9	8.9
	61+	10	9.9
Employment status	Full-time	63	62.4
	Part-time	32	31.7
	Per-diem	5	5.9
ENA Member	Yes	60	59.4
	No	41	40.6
Desire to leave job	Yes	16	15.8
	No	85	84.2
Specialty certification	Yes	34	66.3
	No	67	33.7
Years employed RN	1-3	8	7.9
	4-6	10	9.9
	7-9	8	7.9
	10-12	12	11.9
	13-15	4	4.0
	16-18	7	6.9
	19-21	7	6.9
	22-24	10	9.9
	25-27	11	10.9
	28-30	6	5.9
Years employed ED RN	31+	18	17.8
	Less than a year	1	1.0
	1-3	17	16.9
	4-6	19	18.8
	7-9	9	8.9
	10-12	10	9.9
	13-15	7	6.9
	16-18	9	8.9
	19-21	6	5.9
	22-24	7	6.9
	25-27	7	6.9
	28-30	4	4.0
	31+	5	5.0

Continue...

ENA Member	Yes	60	59.4
	No	41	40.6
Desire to leave job	Yes	16	15.8
	No	85	84.2
Specialty certification	Yes	34	66.3
	No	67	33.7
Marital Status	Single/never married	26	25.7
	Married	59	58.4
	Divorced	10	9.9
	Separated	5	5.0
	Widowed	1	1.0
Educational Level	ASN/Diploma	14	13.9
	BSN	76	75.2
	MSN	11	10.9

Table 1: The demographic characteristics of the study participants.

After completing data collection, all statistical analyses were exported by the Statistical Package for Social Science (SPSS) for Windows (version 20). Descriptive statistics (percentage, mean, and standard deviation), t-tests, analysis of variance (ANOVA), and Pearson's product-moment correlation tests were also used.

Results for research question 1

Resilience was measured by the 25-item Connor-Davidson Resilience Scale (CD-RISC). Job Satisfaction was measured using the 44-item Index of Work Satisfaction (IWS) Part B. The resilience score was obtained by summing the total items on the CD-RISC and obtaining a mean. The job satisfaction score was obtained by summing the total on the items of IWS Part B and obtaining a mean. Pearson's product-moment correlation was performed on the total CD-RISC scale and the IWS Part B scale. A statistically significant association was found for the relationship between resilience and job satisfaction, using Pearson's correlation at $p < .01$ level. A strong positive correlation was found ($r(99) = .761$, $p < .01$), indicating a significant linear relationship between the two variables (Table 2). Resilient participants tend to be more satisfied with their jobs. A simple linear regression was calculated predicting participant's job satisfaction based on their resilience. A significant regression equation was found ($F(1.99) = 135.837$, $p < .001$), with a R^2 of .578. Participants predicted job satisfaction score increased 2.831 for each numerical increment in resilience.

Variable	p	r
Resilience	.000*	.761
Job Satisfaction		

Table 2: Correlation among resilience and job satisfaction.

Note. r = estimate of Pearson product-moment correlation coefficient, *significance level, $p < .01$.

Results for research question 2

A one-way ANOVA was computed comparing the demographic variables with resilience scores. Statistical significance was set at $p < .05$. A statistically significant association was found between age ($p=.003$), years as a registered nurse ($p=.008$), years as a registered nurse in the emergency room ($p=.003$), being a member of the Emergency

Nurses Association ($p=.000$), having no desire to leave the current position ($p=.000$), and marital status ($p=.002$) with resilience scores. Tukey's post-hoc tests were performed if assumption was met, on any significant data to determine the nature of the differences between groups. An increase in age was associated with a higher resilience score. More years as a nurse and an ER nurse were associated with a higher resilience score. Being a member of the ENA, having no desire to leave the current position, and being married was associated with a higher resilience score.

Results for research question 3

A one-way ANOVA was computed comparing the demographic variables with job satisfaction scores. Statistical significance was set at $p < .05$. A statistically significant association was found between age ($p=.005$), years as a registered nurse ($p=.004$), years as a registered nurse in the emergency room ($p=.006$), having no desire to leave the current position ($p=.000$), and marital status ($p=.000$) with job satisfaction scores. Tukey's post-hoc tests were performed if assumption was met, on any significant data to determine the nature of the differences between groups. An increase in age was associated with a higher resilience score. More years as a nurse and an ER nurse were associated with a higher resilience score. Having no desire to leave the current position and being married were also associated with a higher resilience score.

As previously mentioned, the relationships between resilience and job satisfaction have not been studied in the emergency room setting. Only a scant number of qualitative studies have focused on resilience in various units such as critical care, obstetrical, burn, and only one in emergency [37,39,42]. Tubbert's [42] study was the first to examine resilience in the emergency room setting, identifying seven different characteristics of resilient nurses. A few quantitative studies have investigated resilience in various populations of nursing such as new nurses, nurse leaders, and those working in critical care, oncology, and pediatrics however none were in the setting of the emergency room [26,33,43-45]. This is consistent with the fact that the concept of resilience has not been well studied in nurses, let alone emergency nurses. To date, there has been only one published exploratory study that examined resilience and job satisfaction, but it was done in a small sample of psychiatric nurses [46]. Another quantitative study examined resilience, job satisfaction, and anticipated turnover however this study focused on nurses that were no longer at the bedside but rather nurse leaders [33].

Resilience and job satisfaction

The overall resilience scores were $M=86.82$ ($SD=14.37$), therefore this study's sample of ED nurses can be considered highly resilient. The mean score in this study is comparable to the mean score of Hudgins [33], which was 84.60 ($SD=11.3$) although the population for her study was nurse leaders not practicing at the bedside nor in the emergency room. Overall scores of the participants ranged from 46-100, again comparable to the range from Hudgins [33] which was 52-100. As the only other study on resilience in Emergency nurses was a qualitative one [42], the means cannot be compared. Despite this, Tubbert [42] was able to identify seven different characteristics of resilient nurses. *Présence despirit, decisive action, tenacity, interpersonal connectedness, honesty, self-control, and optimism* were the seven resiliency concepts exhibited by all of the participants in her study showing that resiliency exists in this population [42]. Lee et al. [45] examined resilience of critical care nurses however this

study also used a different tool to measure resilience. Mealer et al. [44] used the CD-RISC scale in their study of critical care nurses although mean scores were not reported. Chesak et al. [43] study of new nurses measured resilience using the CD-RISC scale with a comparable yet slightly lower mean of 74.76 ($SD 10.19$). Additionally, Rushton et al. (2015) measured resilience of nurses working in critical care, pediatrics, medical/surgical, and oncology yielding similar yet slightly lower results with an overall mean resilience score of 74.3 ($SD = 11.0$).

The overall job satisfaction score in this study was 242.27 ($SD=53.49$) and the range was 113-301. This is similar to Matos et al. [46] with a mean of 220 and a range of 101 to 282. Matos et al. [46] exploratory study of resilience and job satisfaction among psychiatric nurses found highly resilient nurses using a different resilience tool than the current study however the IWS Part B scale was used to measure job satisfaction with comparable results as the mean total score was 202 with a range of 101 to 282.

This was the first study of its kind to use the CD-RISC scale and IWS-Part B scale among emergency nurses. Although there is little literature to compare results to, it is worth noting that there were some reported significant findings. In this study Pearson Product-Moment correlation coefficient was used to determine the relationship between resilience and job satisfaction. The analysis revealed a strong correlation coefficient of $r(99) = 0.761$ ($P < 0.01$). Of note is that the correlation coefficient was within the medium effect size range of approximately 0.3. The variance (r^2) was .578. Therefore, slightly over 50% of the nurses' job satisfaction was explained by the nurses' resilience scores. This finding is similar to Matos et al. [46] which the analysis revealed a correlation between resilience and job satisfaction with a coefficient of $r(30) = 0.33$ ($p < 0.06$). Hudgins [33] also found a statistically significant relationship between resilience and job satisfaction ($r(87) = 0.51$, $p < .001$) in nurse leaders, using the CD-RISC scale and a single survey question regarding job satisfaction using a Likert response, 'Please rate your satisfaction with your current nurse leader job using the scale provided'. Additionally, an ANOVA test was calculated to see if relationships existed between demographic variables and both the total job satisfaction score and resilience score. There was a statistically significant association was found between mean resilience scores and demographics such as age ($p = .003$), years as a registered nurse ($p = .008$), years as a registered nurse in the emergency room ($p = .003$), being a member of the Emergency Nurses Association ($p = .000$), having no desire to leave the current position ($p = .000$), and marital status ($p=.002$) with resilience scores. Additionally, there was a statistically significant association found between demographics such as age ($p = .005$), years as a registered nurse ($p = .004$), years as a registered nurse in the emergency room ($p = .006$), having no desire to leave the current position ($p = .000$), and marital status ($p = .000$) with mean job satisfaction scores.

Conclusion

This study's findings suggest that ER nurses are resilient and satisfied with their jobs. More years as a nurse and an ER nurse as well as being a member of the ENA, having no desire to leave the current position, and being married were all associated with a higher resilience score. Resilience is a characteristic that can be taught and enhanced with practice [47]. A nurse who struggles to rebound after encountering adversity can develop resilient behaviors that will become protective during future challenges. The enhancement of resilience and the promotion of staff wellbeing is not only valuable to healthcare organizations but also to the nurses and the patients

they care for. Resilient nurses exhibit traits such as intelligence, self-confidence, imagination, ingenuity, and flexibility that can support them in challenging work environments such as the emergency room [48]. Activities such as education, training, mentoring, simulation, and supportive work climates can assist in building resilience and well-being.

Additionally, nurse leaders can become active in the hiring process, identifying resilient traits during interviews by utilizing behavioral interview questions and techniques. Appreciation of the contributing factors to resilience, individual traits that foster resilience, and approaches to build resilience can help in recruiting and retaining nurses which will directly influence nursing practice [35]. Understanding and identifying resilience qualities can assist in providing support and developing programs to help emergency nurses become and stay resilient. As a result, patient care will benefit from the identification and enhancement of resilience in emergency nurses.

Implications for nursing practice and nursing education

Healthcare is typified by high-stress situations which can have a negative impact on the physical and psychological well-being of nurses. As a result of the daily challenges nurses face, stress results which can ultimately lead to job dissatisfaction and turnover. Prior research studies highlight the importance of resilience and job satisfaction. One study to date examined resilience and job satisfaction of psychiatric nurses, discovering a significant positive correlation. This study extended the current knowledge and found a significant positive association between resilience and job satisfaction, providing evidence that resilience plays a vital role in enhancing job satisfaction and mitigating turnover. Resilient nurses can prevail in challenging situations, leading to a greater sense of job satisfaction which can be attributed to job retention [36].

The evidence from this study also shows that personal traits can influence resilience and job satisfaction. This study found a statistically significant association between certain traits such as age, experience, having a marital support system, and being connected in occupational groups/relationships with resilience scores. Additionally, a statistically significant association between age, experience, having a marital support system, and being connected in occupational groups/relationships with job satisfaction scores were also found.

Developing an ability to thrive in unpredictable health care environments is critical to all nurses but particularly to practice in the emergency room. The very nature of emergency nursing is challenging; therefore, resilience should be recognized as a key requisite to support nurses in this environment [49].

This study supports the recommendation of hospitals to implement resilience training for staff nurses. Education, training, mentoring, simulation, and supportive work climates can assist in building resilience and well-being for the profession of nursing in practice. Also, introducing resilience training sessions in the clinical setting for undergraduate nursing students as well as annual resilience training competencies for post-graduate nurses would enhance resilience and therefore improve patient outcomes and job satisfaction.

Recommendations for future research

This is the first study to date that has closely examined resilience and job satisfaction in ER nurses and it is clear through the results of

this study that these concepts are worthy of further investigation. The study's findings also suggest that the practice environment due to its unique characteristics is a crucial element in ER nursing and should be used as a variable whenever this population is being studied. This study also suggests that there may be some differences in the resilience and job satisfaction of ER nurses regarding age, number of years as a nurse, number of years as an ER nurse, whether or not they are a member of the ENA or have a desire to leave their current position, and marital status. As a result, it may be beneficial to study ER nurses as they progress through their career from a broader perspective. Understanding what exactly makes them more satisfied or more resilient would be of the utmost importance for the profession of nursing. Additionally, identifying what specific traits nurses possess that have been identified as resilient, may offer insight into strategies for replicating these traits in others.

Competing Interests

The author declares that there is no competing interests regarding the publication of this article

References

1. Sachdeva S, Jamshed N, Aggarwal P, Kashyap SR (2019) Perception of Workplace Violence in the Emergency Department. *J Emerg Trauma Shock* 12: 179-184.
2. Schnapp BH, Slovis BH, Shah AD, Fant AL, Gisondi MA, et al. (2016) Workplace Violence and Harassment against Emergency Medicine Residents. *West J Emerg Med* 17: 567-573.
3. Gacki-Smith J, Juarez AM, Boyett L, Homeyer C, Robinson L, et al. (2009) Violence against nurses working in U.S. emergency departments. *J Nurs Adm* 39: 340-349.
4. Stowell KR, Hughes NP, Rozel JS (2016) Violence in the emergency department. *Psychiatr Clin North Am* 39: 557-566.
5. Wolf L, Perhats C, Delao A, Brim CB, Gentry JC, et al. (2020) Violence and Its Impact on the Emergency Nurse. *J Emerg Nurs* 46: 354-358.
6. Emergency Nurses Association (2011) Emergency department violence surveillance study. Institute for Emergency Nursing Research.
7. Wolf L, Perhats C, Delao A, Moon M, Clark P, et al. (2016) "It's a burden you carry": Describing moral distress in emergency nursing. *J Emerg Nurs* 42: 37-46.
8. Centers for Medicare and Medicaid Services (2012) Emergency Medical Treatment and Labor Act (EMTALA).
9. Chao M, Shih C, Hsu S (2016) Nurse occupational burnout and patient-rated quality of care: The boundary conditions of emotional intelligence and demographic profiles. *Jpn J Nurs Sci* 13: 156-165.
10. Gómez-Urquiza JL, De la Fuente-Solana EI, Albendín-García L, Vargas-Pecino C, Ortega-Campos EM, et al. (2017) Prevalence of Burnout Syndrome in Emergency Nurses: A Meta-Analysis. *Critical Care Nurse* 37: e1-e9.
11. Li Y, Jones C (2013) A literature review of nursing turnover costs. *J Nurs Manag* 21: 405-418.
12. Salyers MP, Fukui S, Rollins AL, Firmin R, Gearhart T, et al. (2015) Burnout and self-reported quality of care in community mental health. *Adm Policy Ment Health* 42: 61-69.
13. Snively T (2016) A brief economic analysis of the looming nursing shortage in the United States. *Nurs Econ* 34: 98-100.
14. Steinberg B, Klatt M, Duchemin A (2017) Feasibility of a mindfulness-based intervention for surgical intensive care unit personnel. *Am J Crit Care* 26: 10-18.
15. Bogaert PV, Timmermans O, Weeks SM, van Heusden D, Wouters K, et al. (2014) 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. *Int J Nurs Stud* 51: 1123-1134.

16. You L, Aiken LH, Sloane DM, Liu K, He G, et al. (2013) Hospital nursing, care quality, and patient satisfaction: cross-sectional surveys of nurses and patients in hospitals in China and Europe. *Int J Nurs Stud* 50: 154-161.
17. Embriaco N, Papazian L, Kentish-Barnes N, Pochard F, Azoulay E, et al. (2007) Burnout syndrome among critical care healthcare workers. *Curr Opin Crit Care* 13: 482-488.
18. Epp K (2012) Burnout in critical care nurses: a literature review. *Dynamics* 23: 25-31.
19. Hooper C, Craig J, Janvrin DR, Wetsel MA, Reimels E, et al. (2010) Compassion satisfaction, burnout, and compassion fatigue among emergency nurses compared with nurses in other selected inpatient specialties. *J Emerg Nurs* 36: 420-427.
20. Poncet MC, Toullic P, Papazian L, Kentish-Barnes N, Timsit J, et al. (2007) Burnout syndrome in critical care nursing staff. *Am J Respir Crit Care Med* 175: 698-704.
21. Adriaenssens J, De Gucht V, Maes S (2015). Determinants and prevalence of burnout in emergency nurses: A systematic review of 25 years of research. *Int J Nurs Stud* 52: 649-661.
22. Nursing Solutions Inc (2021) 2021 NSI National healthcare retention & RN staffing report.
23. American Nurses Association (2016) Nursing shortage.
24. Hinderer KA, VonRueden KT, Friedmann E, McQuillan KA, Gilmore R, et al. (2014) Burnout, compassion fatigue, compassion satisfaction, and secondary traumatic stress in trauma nurses. *J Trauma Nurs* 21: 160-169.
25. Institute of Medicine (2011) *The Future of Nursing: Leading Change, Advancing Health*. Washington, DC: The National Academies Press.
26. Rushton C, Batcheller J, Schroeder K, Donohue P (2015) Burnout and resilience among nurses practicing in high-intensity settings. *Am J Crit Care* 24: 412-420.
27. Jones CB, Gates M (2007) The costs and benefits of nurse turnover: A business case for nurse retention. *Online Journal of Issues in Nursing* 12: 1-3.
28. Kurnat-Thoma E, Ganger M, Peterson K, Channell L (2017) Reducing annual hospital and registered nurse staff turnover-A 10-element onboarding program intervention. *SAGE Open Nursing* 3: 1-13.
29. Brewer C, Kovner C, Greene W, Tukov-Shuser M, Djukic M, et al. (2011) Predictors of actual nurse turnover in a national sample of newly licensed registered nurses employed in hospitals. *J Adv Nurs* 68: 521-538.
30. The Lewin Group Inc (2009) Evaluation of the Robert Wood Johnson Foundation wisdom to work: Retaining experienced nurses research initiative.
31. Jones CB (2008) Revisiting nurse turnover costs: Adjusting for inflation. *J Nurs Adm* 38: 11-18.
32. Burr S, Stichler J, Poetler D (2011) Establishing a mentoring program: transforming organizational culture and improving nurse retention. *Nurs Womens Health* 15: 215-224.
33. Hudgins TA (2016) Resilience, job satisfaction and anticipated turnover in nurse leaders. *J Nurs Manag* 24: E62-E69.
34. Shin J, Taylor M, Seo M (2012) Resources for change: The relationships of organizational inducements and psychological resilience to employees' attitudes and behaviors toward organizational change. *Academy of Management Journal* 55: 727-748.
35. Hart P, Brannan J, De Chesnay M (2014) Resilience in nurses: an integrative review. *J Nurs Manag* 22: 720-734.
36. Jackson D, Firtko A, Edenborough M (2007) Personal resilience as a strategy for surviving and thriving in the face of workplace adversity: A literature review. *J Adv Nurs* 60: 1-9.
37. Kornhaber RA, Wilson A (2011) Building resilience in burns nurses: a descriptive phenomenological inquiry. *J Burn Care Res* 32: 481-488.
38. McAllister M, McKinnon J (2009) The importance of teaching and learning resilience in the health disciplines: A critical review of the literature. *Nurse Educ Today* 29: 371-379.
39. Mealer M, Jones J, Moss M (2012) A qualitative study of resilience and posttraumatic stress disorder in United States ICU nurses. *Intensive Care Med* 38: 1445-1451.
40. Mealer M, Jones J, Newman J, McFann J, Rothbaum B, et al. (2012) The presence of resilience is associated with a healthier psychological profile in intensive care unit (ICU) nurses: results of a national survey. *Int J Nurs Stud* 49: 292-299.
41. Stamps PL (1997) *Nurses and work satisfaction; an index for measurement*, 2 ed., Chicago, Illinois: Health Administration Press.
42. Tubbert S (2016) Resiliency in Emergency Nurses. *J Emerg Nurs* 42: 47-52.
43. Chesak S, Bhagra A, Schroeder D, Foy D, Cutshall S, et al. (2015) Enhancing resilience among new nurses: feasibility and efficacy of a pilot intervention. *Ochsner J* 15: 38-44.
44. Mealer M, Jones J, Meek M (2017) Factors affecting resilience and development of posttraumatic stress disorder in critical care nurses. *Am J Crit Care* 26: 184-192.
45. Lee KJ, Forbes ML, Lukasiewicz GJ, Williams T, Sheets A, et al. (2015) Promoting Staff Resilience in the Pediatric Intensive Care Unit. *Am J Crit Care* 24: 422-430.
46. Matos P, Neushotz L, Quinn-Griffin M, Fitzpatrick J (2010) An exploratory study of resilience and job satisfaction among psychiatric nurses working in inpatient units. *Int J Ment Health Nurs* 19: 307-312.
47. Masten AS (2001) Ordinary magic: Resilience processes in development. *Am Psychol* 56: 227-238.
48. Brennan E (2017) Towards resilience and wellbeing in nurses. *Br J Nurs* 26: 43-47.
49. Fertleman C, Carroll W (2013) Protecting students and promoting resilience. *BMJ* 347: f5266.