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Emergency Nursing Workforce, Burnout, and Job Turnover in the United States: A National Sample Survey Analysis

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Abstract

Introduction: Burnout is significantly associated to job turnover. However, few studies have examined emergency nurses who have already left their job to better understand the reason behind job turnover. It also remains unclear if emergency nurses differ from other nurses regarding burnout and job turnover reasons. Thus, our study aimed to: 1) test differences in reasons for turnover or not currently working between emergency nurses and other nurses; and 2) ascertain pre-pandemic factors associated with burnout as a reason for turnover among emergency nurses.

Methods: We conducted a secondary analysis of the 2018 National Sample Survey for Registered Nurses (weighted N=3,004,589) via a public-use dataset from Health Resources & Services Administration. Data were analyzed using descriptive statistics, chi-square and t-test, unadjusted and adjusted logistic regression applying design sampling weights

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Norful: Writing-Original draft preparation and editing; Investigation; Conceptualization; Interpretation of Data; **Cato:** Conceptualization; Writing-Original draft preparation and editing; Interpretation of Data. **Chang:** Conceptualization; Writing-Original draft preparation and editing; Interpretation of Data. **Amberson:** Interpretation of data; Writing-Review and editing. **Castner:** Writing-Original draft preparation and editing; Investigation; Conceptualization; Data analysis; Interpretation of Data.

Results: There were no significant differences in burnout comparing emergency nurses to other nurses. Seven job turnover reasons were endorsed by emergency nurses and significantly higher than other nurses: Insufficient staffing (11.1%,95%CI [8.6, 14.2], p=.01); physical demands (5.1%,95% CI[3.4, 7.6], p=.44); patient population (4.3%,95%CI [2.9, 6.3], p<.001); better pay elsewhere (11.5%,95%CI [9, 14.7], p<.001); career advancement/promotion (9.6%,95%CI [7.0, 13.2], p=.01); length of commute (5.1%,95%CI [3.4, 7.5], p=.01); and relocation (5%,95%CI [3.6, 7.0], p=.01). Increasing age was associated with decreased odds of burnout in adjusted models as well as increased years since nursing licensure.

Discussion: Several modifiable factors appear associated with job turnover. Interventions and future research should account for unit-specific factors that may precipitate job turnover among nurses.

Keywords

Burnout; Professional; Workplace; Registered Nurses; Emergency Nurses; Population Surveillance Survey

Introduction

The unprecedented COVID-19 pandemic introduced substantial challenges for nurses to meet the high demand for patient care, altered clinical work environments and team compositions, and threatened personal safety risk during care delivery.[1,2] A substantial body of evidence has been formed surrounding exacerbated nursing burnout rates during the pandemic.[3] Nurses have been found to have significantly higher burnout rates than other healthcare worker disciplines and some suggest that pre-pandemic system-level factors contributed to this phenomenon.[4] Prior to the pandemic, there were limited literature that isolates burnout factors in emergency nurses, a healthcare worker population that were thrust onto the frontlines of the COVID-19 response. More and more organizations and policymakers have called for the investigation of factors that precipitate burnout risk. The US Surgeon General recently released an advisory report highlighting the importance of identifying and addressing factors that contribute to burnout.[5] Yet, this knowledge remained largely unknown prior to the onset of COVID-19 and inhibits our ability to inform interventions during the aftermath of the pandemic outbreak. In this present study, we seek to advance the work on national estimates of emergency nurses to examine reasons for burnout and workforce turnover. The aims of our study were to: 1) test pre-pandemic differences in reasons for turnover or not currently working between emergency nurses and other registered nurses (RN); and 2) ascertain factors associated with burnout as a reason for turnover or not currently working among emergency nurses. This knowledge may inform practice and policy changes for present day pandemic recovery by addressing pre-pandemic burnout factors that specifically impacted emergency nurses.

Clinician burnout, defined by emotional exhaustion, cynicism, and a low sense of accomplishment at work[6] is a pervasive challenge affecting broad swaths of health care workforce. Recognized by the World Health Organization as an “occupational phenomenon,” burnout can primarily be attributed to the work environment and ongoing discrepancy between an employee’s resources and their workload.[7] Acute care clinicians,

such as nurses and physicians working in an emergency department (ED) setting (emergency nurses and physicians), may be particularly vulnerable to burnout. Pre-pandemic literature demonstrates that almost half of the 900,000 practicing physicians in the US report symptoms of burnout with emergency physicians endorsing the highest rates.[8] Similarly, a systematic review conducted in 2017 found higher rates of emergency nurse burnout (31%) compared with nurses working in other specialties or units.[9] Burnout in nurses has been associated with not only adverse individual health outcomes such as increased risk of depression, drug abuse, and suicidal ideation, but also suboptimal professional and patient care outcomes, including increased workforce turnover, decreased quality of care, increased hospital-acquired infections, and reduced patient satisfaction.[6–8]

Compared to other nursing specialties, emergency nurses may face unique risk factors for burnout due to the emergency care work environment, such as experience with violence and traumatic incidents.[9–11] While past research has documented the prevalence of burnout amongst the emergency nursing workforce, such studies have been limited by small sample sizes and local sampling approaches, unable to capture the diversity of clinical, geographic and demographic environments that encompass the emergency nursing workforce in the US.[12–14] Additionally, potential key factors associated with the presence of burnout have been described, ranging from individual, environmental, and system level variables.[15] Few studies have examined burnout in participants who have left their job position or are not currently working, resulting in the potential for a healthy worker or survivor bias in the current body of evidence. In previous work on a national level, over 17% of those licensed to practice as a RN were not working in nursing in 2017.[16] An analysis of reasons for job turnover that includes those not currently working after recently leaving a nursing position, among a diverse and nationally representative sample of emergency nurses, is essential to identify the most salient, priority focus of both risk detection and as a needs assessment for future national level interdisciplinary policies and interventions.

Materials & Methods

Design.

This study was a secondary data analysis design of responses to the *2018 National Sample Survey of Registered Nurses*, publicly available and administered by the United States Census Bureau.[17] The required survey validity and reliability procedures are codified through the Office of Management and Budget's Standards and Guidelines for Statistical Surveys.[18,19] Per institutional policy for datasets that are publicly available and de-identified, no human subjects ethical approval was required.

Participants.

Participant sampling and recruitment information is publicly available at the study website.[17] Briefly, the source population for the sampling frame consisted of RNs from each of the 50 United States and the District of Columbia. Stratified sampling by state was applied separately for RNs and nurse practitioners. We aggregated the dataset into two groups 1) participants that identified as working in an ED setting in 2016 or 2017 and 2) nurses working in all other settings. We excluded 1) those not working due to retirement on

December 31, 2017; 2) those who were not working in nursing for pay in both 2016 and 2017; and 3) participants that identified themselves as an advanced practice nurse (certified nurse practitioners, certified clinical nurse specialist, certified nurse-midwife, or certified registered nurse anesthetist). In order to apply burnout perceptions among emergency nurses more specifically only to their emergency nursing job, we also excluded those who left another nursing position in 2016 due to burnout and entered emergency nursing in 2017.

Variables.

Demographic and work characteristics included in this analysis were sex, age, race and ethnicity, marital status, highest degree in nursing, years worked in nursing, hours worked per week, household income, thoughts of turnover in current position, temporary employment, degree enrollment, and secondary nursing position in addition to primary nursing employment. The variables listed in Table 1 include the alphanumeric identifier (e.g. B1) that appeared to participants on the original NSSRN survey and can also be cross-referenced with the publicly available survey to clarify future replication of our study. Emergency nurse included management, educators, direct care clinician, and many nursing roles associated with the emergency setting. Our analysis included critical access hospital, float, flex, and travel nurses spent the most time in the emergency setting, even if their primary employer may not have been a specific ED.

Data Analysis.

Analyses were conducted in STATA (Version 14.0, College Station, TX) and Python (Version 3.8). All analyses were conducted using weighted design to relay the characteristics and results of the population estimates. The purpose of the weighting was population representativeness and weights were generated by NSSRN in a complex, multi-step process that incorporates sample design and the probabilities of participant selection. Design weights were applied using the jackknife estimation procedure. Data were analyzed using descriptive statistics, chi-square and t-test, and unadjusted and adjusted logistic regression applying design sampling weights.

Results

Characteristics of study subjects.

A total of 1,266 respondents (2.52%, weighted N=217,706) identified as emergency nurses while 18,589 (36.98%, weighted N=2,786,879) were aggregated as other nurses for our analysis. Table 2 summarizes the weighted estimates of the demographic characteristics of emergency nurses and other nurses. The mean age of emergency nurses was 41.60 years, while the mean age for other nurses was older at 46.8 years. Similarly, emergency nurses had less work experience (11.7 years), on average, compared to their counterparts (16.9 years). A greater proportion of other nurses (91%), compared to emergency nurses (77.8%), identified as female. Participants identified predominantly as White, Non-Hispanic (71.1–72.4%) and more than half held a bachelor’s degree as their highest degree attained (52.7–54.5%). A larger proportion of emergency nurses worked full time (84.5%) compared to other nurses (79.3%). Further, more emergency nurses held other nursing positions (15.6% vs. 9.9%) in addition to their primary nursing employment and were enrolled (20.1% vs.

12.2%) in a nursing degree or certificate program to further their education. Almost half of our sample reported an annual household income of greater than $100,000 USD (45.0–49.4%). [Table 2]

Reasons for turnover or not currently working.

Table 3 depicts the cross-tab results for the weighted estimated proportion of emergency nurses, compared to non-emergency nurses, who endorsed each of the 22 reasons for turnover or no longer working in nursing. While not significantly different, almost 11% (95%CI [8.3, 13.6]) of emergency nurses endorsed burnout as a reason for turnover or not currently working compared with 8.5% other nurses (8.5%, 95%CI [7.9, 9.1]). There were seven reasons for job turnover that were endorsed by emergency nurses and significantly higher than non-emergency nurses: Insufficient staffing (11.1%, 95%CI [8.6, 14.2], p=.01); physical demands (5.1%, 95% CI[3.4, 7.6], p=.44); patient population (4.3%, 95%CI [2.9, 6.3], p<.001); better pay elsewhere (11.5%, 95%CI [9, 14.7], p<.001); career advancement/promotion (9.6%, 95%CI [7.0, 13.2], p=.01); length of commute (5.1%, 95%CI [3.4, 7.5], p=.01); and relocation (5%, 95%CI [3.6, 7.0], p=.01). [Table 3]

Table 4 depicts the logistic regression results with burnout as the dependent variable. Of the nurses that endorsed burnout, we tested the associations between burnout and the other endorsed factors for job turnover. First, the results depict associations with burnout among both the emergency nurses category and each of the other reasons for turnover or not currently working in separate models before adjusting for demographics. Factors associated with increased odds of burnout, controlling for emergency nursing status, include insufficient staffing, lack of good management, patient population, physical demands, and stressful work environment. Factors associated with a decreased odds of burnout included better pay elsewhere, career advancement/promotion, disability/illness, family caregiving, laid off, relocation, educational program, spouse employment opportunities, sign-on bonus, and other (unspecified). No association was observed in these unadjusted models for career change, inability to practice to the full extent, interpersonal differences, lack of advancement opportunity, lack of collaboration/communication, length of commute, or scheduling.

In the models adjusting for age, race, sex, highest degree, and years since first nursing license, being an emergency nurse was no longer associated with burnout as a reason for turnover or not currently working when controlling for any of the other reasons for leaving/not working tested. All of the 22 other reasons tested were associated with burnout, and the strength of association increased substantially (e.g. from odds ratio of 1.77 to 43.96 for stressful work environment). In addition to the data shown in Table 4, increasing age was significantly associated with decreased odds of burnout in all adjusted models. Increased years since nursing license was significantly associated with decreased odds of burnout in all adjusted models except those for better pay, insufficient staffing, good management, and sign-on bonus. Similarly, compared to the referent of a diploma degree, a highest degree as an Associate, Bachelor, or Masters degree was associated with decreased odds of burnout. Doctoral education was not associated in any of the models. Being female was associated with decreased odds of burnout in the adjusted models when also controlling for insufficient

staffing, scheduling, and stressful work environment. Race was not associated with burnout in our models. [Table 3]

Discussion

This study aimed to 1) explore reasons for job turnover among a nationally representative sample of emergency nurses, 2) compare these reasons to the reasons of other RNs, and 3) analyze factors associated with burnout as a reason for job turnover or not currently working in nursing (limited by those that endorsed burnout as a reason for turnover). Our study contributes to the important growing body of evidence exploring burnout and emergency nurse turnover in the United States. In this nationally representative sample, 10.6% of all emergency nurses reported burnout prior to the pandemic as a reason they had left a job or were no longer working over a period of less than two years. This represents an estimated 23,000 RNs. Now, over two years into the COVID-19 pandemic, these numbers have likely increased.[20] Characteristics of the emergency nursing subsample differed from other nurses in terms of age, years since nursing license, educational attainment, and gender. These demographic factors were also associated with differences in burnout as a reason for turnover or not working in nursing. Thus, levels of burnout in emergency nursing may be indirectly explained by demographic differences of emergency nurses from RN working in other settings rather than explained solely by working in the specialty alone.

Our results are consistent with past work finding job absenteeism and turnover associated with nursing reports of burnout.[14,21] RNs experience high rates of burnout in general, with up to one-third of participants reporting burnout in previous smaller studies.[9] Existing studies that sample the current workforce are limited by a healthy worker effect, or survivor bias in burnout estimates, and fail to capture respondents that already have left their position. Our results contribute uniquely to the body of literature by including those who left a job or are no longer working in the emergency nursing workforce analysis at the national level, and reveal a national crisis in emergency nursing retention. Given the essential nature of the emergency nursing occupation and high proportion of turnover due to burnout in the specialty, this study provides a timely and essential contribution to knowledge as a needs assessment for interdisciplinary preventative intervention to consider as we move beyond the COVID-19 pandemic.

In this present study, we investigated factors associated with both burnout and job turnover, using burnout as the primary dependent variable (Table 4). Past research demonstrates that burnout is associated to a variety of patient, organizational, and provider outcomes. For example, burnout is significantly associated to increased medical errors, poor perceived patient communication and satisfaction.[8] Further, there is evolving evidence that burnout yields suboptimal health risk in clinicians, including poor psychological outcomes, (e.g., depression, substance abuse, and suicidality risk).[22,23] Past studies have also found a mediating role between burnout and job turnover, hence our present focus on burnout.[24] Despite our results depicting no differences in burnout or turnover between emergency nurses and other RNs, we found significant difference in reasons for job turnover between groups. This finding suggests that factors contributing to burnout and turnover may vary by nursing discipline or setting. This result is aligned with emerging evidence that has

depicted significant differences in unit culture.[25] It also supports the idea that there is no "one-sized-fits-all" approach to reducing burnout.

It is also important to acknowledge other factors outside of burnout may independently contribute to job turnover. This present study identified additional factors contributing to job turnover such as insufficient staffing, lack of good management, patient population, physical demands, and stressful work environment. This result is consistent with existing evidence about the substantial influence that nurse work environment factors have on nursing and patient outcomes. For example, safe staffing ratios has increasingly been at the forefront of recent policy discussions with mandated ratios disputed. Consistent with past evidence, insufficient staffing has been linked to job turnover, failure to rescue, and missed and delayed patient care.[26] Cross-sectional and longitudinal observational studies have demonstrated consistent associations between increased nurse-to-patient ratios, and higher education and training of nurses, with improved morbidity and mortality for hospital inpatients.[27] In this current study, stressful work environments, scheduling, and insufficient staffing appear to be associated with a gender difference between male and female nurses' experience with burnout as a reason for not working or turnover. While staffing ratios have been found to significantly impact patient safety risk, length of stay, and quality of care[28], more research is needed to isolate which setting-specific (e.g., emergency department; medical/surgical unit) ratios optimize patient care outcomes and mitigate burnout and subsequent job turnover. Further, it remains unclear how unmet peri- and post-pandemic staffing needs precipitated higher risk for burnout and/or job turnover. Appropriate emergency nurse staffing may rely on having adequate overall budgetary and human resources in a hired pool of qualified full time equivalents, ensuring sufficient numbers and skills mix of nurses for shift-to-shift patient care, and maximizing efficient work processes to enhance productivity.[29] The Emergency Nurses Association (ENA) has developed staffing guidelines, and further health services research is needed to ascertain the effectiveness and efficacy of implementing these guidelines, the national proportion of EDs that meet or exceed recommended benchmark staffing levels, and the impact on both patient outcomes and emergency nurse burnout and turnover.[29,30] Physical demands were also found to be endorsed by emergency nurses significantly more than non-emergency nurses as a reason for job turnover. However, it remains unclear what causes increased physical demand and if physical demand is related to a particular patient population. More research that investigates the physical aspects of job performance is needed to inform policies and practice that promote a healthy and safe work environment for emergency nurses.

Evidence on promising interventions to reduce burnout and job turnover include enhancing the quality of work environments (including sufficient resources/staffing among other factors), implementing culture change, applying leadership strategies, and supporting individual coping.[31] While clinician self-care practices can mitigate some risk factors for burnout, there is little supporting evidence individual-level intervention alone without also addressing multi-level workload and work environments in the emergency setting.[32–34] The National Academy of Medicine's (NAM) *Future of Nursing 2020–2030* report highlights the importance and necessity of addressing policies, structures and systems that create threats in the workplace that contribute to burnout and poor mental/physical health among the nursing workforce.[35] NAM recognizes that the health and well-being of nurses directly impacts

the safety, quality and cost of the care they provide. Consistent with recommendations in past studies, future work aimed at the precursors of nursing burnout as modifiable targets of intervention to reduce turnover offer the promise of improving individual well-being, career longevity, improved patient care outcomes and enhancing the financial viability of health care organizations.[31,36–39] Emergency specialty-specific applications of the guidance provided in the framework for clinician well-being, also published by NAM, is needed, parallel to the collaborative models produced jointly by intensive care clinician specialty organizations.[40,41]

Our study also indicates increasing age and years since nursing license appear to have a protective association with burnout. These findings warrant further exploration, but it may be reasonable to proactively tailor interventions to younger nursing cohorts and prioritize early career nurses. One cross-sectional study examined formal orientation programs on burnout and emergency nurses' intent to leave.[42] Authors found that participation in a formal orientation program may enhance a sense of personal accomplishment, decreasing intent to leave.

Limitations

The results of our study must be interpreted while considering several limitations. As a cross-sectional survey, the results represent factors associated with, but not causative, for turnover. Additionally, sampling bias or random chance may have impacted the data observed and therefore the evidence presented in this paper needs to be interpreted as such. Due to limitations of the dataset, we were unable to cluster the sample by types of EDs (e.g., freestanding ED vs. hospital-based ED). Burnout in this study was measured as an endorsement to one response option among a list of up to 23 factors associated with intention to leave or already having left a nursing job, and individual participants may have conceptualized burnout differently. The survey did not ask specifically what factors contributed to burnout and our analysis about associations between burnout and factors for job turnover were limited by a cluster analysis. Finally, due to the smaller sample size of emergency nurses, compared to the overall workforce, wide confidence intervals were observed in weighted estimates.

Implications for Emergency Nursing

This paper aimed to identify factors prior to COVID-19 that precipitated burnout risk and job turnover in emergency nurses. This study contributes new evidence about emergency nurses after they have left their primary position and provides key insight to what drives nursing workforce turnover. While there were no significant differences in burnout between emergency nurses and other nurses, we did find significant difference of factors that precipitate job turnover when comparing groups. Factors such as staffing, physical job demands and better pay elsewhere were significantly associated with burnout and turnover. Age and increased experience appeared to be protective of burnout. Organizations should invest efforts in new graduate nurse retention interventions and continue to test the impact of unit-specific staffing ratios on burnout, among other organizational outcomes.

Conclusion

In summary, this study quantified burnout endorsement and reasons for national nursing estimates of job turnover or no longer working, in both emergency and non-emergency nurses prior to the pandemic at the national level. There was no significant difference in burnout when comparing emergency nurses to other nurse. However, we identified that insufficient staffing, physical demands, patient population, better pay elsewhere, career advancement, length of commute, and relocation were significantly endorsed more in emergency nurses compared to all other nurses for job turnover reasons. Our findings suggest the need to address job turnover factors at the unit-specific level as the needs and preferences of nurses across settings may vary, and subsequently yield job turnover differently.

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Data, Code, and Research Materials Availability

Data is de-identified and publicly available at https://data.hrsa.gov/topics/health-workforce/nursing-workforce-survey-data. Analytic code is available upon reasonable request.

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Implications for Emergency Nursing

- What is already known about this topic?

  Burnout and workforce turnover among nurses have reached alarming proportions and is associated to poor work environment characteristics. Yet, little is known about reasons for turnover specific to emergency nurses. In response to the pandemic, it's critical to understand historic causes of burnout that may yield emergency nurse turnover.

- What does this paper add to the currently published literature?

  This paper presents new evidence about burnout and workforce turnover reasons among emergency nurses that have already left their position.

- What is the most important implication for clinical emergency nursing practice?

  Results of this study may help inform burnout interventions, work environment policy change, while helping to mitigate contributory factors for emergency nurse turnover.

Table 1.

Items and respective responses extracted for data analysis

Variable	NSSRN item	Responses selected
Emergency nurse	*B16. For the primary nursing position you held on December 31, 2017, in what level or type of work did you spend most of your time?*	Emergency vs. (all other categories)
	H8. Which of the following best describes the employment setting of the primary nursing position you held on December 31, 2016?"	Emergency department vs. (all other categories)
	B13. Which of one of the following best describes the employment setting of the primary nursing position you held on December 31, 2017?	Emergency Department vs. (all other categories)
Turnover or not working	B1. "*On December 31, 2017, were you employed or self-employed in nursing?*"	No
	B28. "*Have you left the primary nursing position you held on December 31, 2017?*"	Yes
	H5. "*How would you describe the primary nursing position you held on December 31, 2016?*"	Different employer as primary nursing position on December 31, 2017 OR Different position and same employer as primary nursing position on December 31, 2017
Reasons for turnover or not working	C1. *Which of the following reasons contributed to your decision toleavethe primary care nursing position you held on December 31, 2017?*"	23 response options, including an option for "Bumout"
	G6. "*What are the primary reasons you were not working in a nursing position for pay on December 31, 2017*?"	
	H7. "*What were the primary reason(s) for your employment change?*"	

Table 2.

Characteristics of emergency nurses compared to other nurses

	Emergency nurses (N = 217,706)	Other nurses (N = 2,786,879)		
	%	%	F(*t*)	P
Sex			66.91	**<.0001**
Male	22.2	9.1		
Female	77.8	91.0		
Age – *mean*	*41.6*	*46.8*	*(11.8)*	**<.001**
				.13
Race & ethnicity			1.7	
Hispanic	13.4	10.8		
white non-Hispanic	72.4	71.7		
Black non-Hispanic	5.5	8.2		
Asian non-Hispanic	.4	5.7		
American Indian	.4	.3		
Pacific Islander	1.4	.6		
Other	.9	.9		
Multiple	2.0	1.8		
Marital status			4.5	**.01**
Married	66.3	70.4		
Widowed	14.6	15.8		
Never married	19.1	13.8		
Highest degree in nursing			3.3	**.02**
Diploma	3.0	6.4		
Associates	35.8	33.6		
Bachelors	54.5	52.7		
Masters	6.7	6.9		
PhD/DNP	.1	.3		
Turnover or not working	32.4	28.7	3.1	.08
Years in nursing ▫ - *mean*	*11.7*	*16.9*	*(12.1)*	**<.001**
Full- or part-time work			9.1	**.01**
Full-time	84.5	79.3		
Part-time	15.5	20.7		
Typical hours worked per week – *mean*	*37.6*	*37.3*	(.5)	.59
Household annual income USD			1.5	.19
<=25,000	.5	.9		
25001–35000	.3	1.0		
35001–50000	3.9	.5		
50001–75000	18.6	20.0		
75001–100000	24.7	24.2		
100001–150000	28.9	30.0		

	Emergency nurses (N = 217,706)	Other nurses (N = 2,786,879)		
	%	%	F(*t*)	P
150001–200000	15.3	12.0		
>200000	.8	7.4		
Enrolled in degree or certificate			14.6	**<.001**
Yes in nursing	20.1	12.2		
Yes in non-nursing field	1.7	.8		
Remained in job but considered leaving in past year			.27	.61
Yes	89.9	91.3		
Employed by temporary employment service			.6	.53
Primary	3.3	2.6		
Secondary	1.4	1.1		
Any other nursing positions			21.9	**<.001**
Yes	15.6	9.9		

Note: CI=Confidence Interval. Age truncated at 78. Years in nursing variable truncated at 50. USD=United States Dollar.

Table 3.

Differences in reasons for job turnover or currently not working in nursing between emergency nurses and other nurses

	Emergency nurses (N = 217,706)		Other nurses (N = 2,786,879)		Group difference	
	%	95%CI	%	95% CI	F	P
Insufficient staffing	11.1	(8.6, 14.2)	7.9	(7.3, 8.5)	6.7	**.01**
Stressful work environment	10.2	(8.1,12.8)	9.5	(9.0,10.1)	.3	.56
Lack of good management	10.7	(8.5,13.4)	9	(8.4, 9.7)	2.1	.15
Physical demands	5.1	(3.4, 7.6)	3.4	(3.0, 3.8)	4.2	**.04**
Scheduling	6.6	(4.9, 8.7)	5.6	(5.1, 6.1)	1.2	.27
Lack of collaboration/communication	4	(2.7, 5.9)	3.5	(3.1, 3.9)	.5	.48
Patient population	4.3	(2.9, 6.3)	1.8	(15, 2.2)	13.6	**<.001**
Interpersonal differences	4.6	(3.2, 6.6)	3.8	(3.4, 4.2)	1.2	.28
Inability to practice to full extent	2.6	(1.6, 4.3)	2.4	(2.1, 2.8)	.1	.74
Any burnout	10.6	(8.3, 13.6)	8.5	(7.9, 9.1)	3.1	.08
Better pay elsewhere	11.5	(9, 14.7)	7.5	(6.9, 8.1)	11.4	**<.001**
Career advancement/promotion	9.6	(7.0, 13.2)	6.1	(5.5, 6.7)	7.6	**.01**
Lack of advancement opportunity	4.4	(2.9, 6.6)	4.0	(3.6, 4.5)	.2	.69
Career change	5.4	(3.6, 8)	3.8	(3.4, 4.2)	3.0	.09
Educational program	1.3	(.5, 3.3)	1.1	(.9, 1.4)	.11	.74
Retirement	1.2	(.1, 2.5)	1.9	(17, 2.1)	1.6	.21
Laid off	.9	(.4, 2.2)	1.5	(1.3, 1.8)	1.5	.23
Length of commute	5.1	(3.4, 7.5)	.3	(2.5, 3.3)	6.6	**.01**
Relocation	5	(3.6, 7.0)	3.1	(2.7, 3.5)	7.9	**.01**
Family caregiving	2.1	(1.2, 3.6)	2.9	(2.5, 3.3)	1.4	.23
Spouse employment opportunities	.9	(.5, 1.7)	.6	(.5, .8)	1.4	.24
Disability/illness	.6	(.2, 1.5)	1.2	(1, 1.4)	2.1	.15

Table 4.

Reasons for turnover or not currently working associated with burnout

				Unadjusted			Adjusted[*]		
Reason	**Emergency nurses (vs. other nurses)**								
	OR	**95% CI**	***P***	**OR**	**95% CI**	***P***	**OR**	**95% CI**	***P***
Better pay elsewhere	.12	(.09,.16)	<001	.72	(.60, .85)	<.001	7.45	(6.02, 9.24)	<.001
Career advancement/promotion	.13	(.09, .17)	<.001	.48	(.39, .60)	<.001	4.36	(3.39, 5.61)	<.001
Career change	.12	(.09, .16)	<.001	--	--	--	8.34	(6.30, 11.05)	<.001
disability/illness	.12	(.09, .16)	<.001	.30	(.20, .46)	<.001	4.20	(2.61, 6.75)	<.001
Family caregiving	.12	(.09, .16)	<.001	.44	(.31, .64)	<.001	4.23	(2.90, 6.15)	<.001
Inability to practice to full extent	.12	(.09, .16)	<.001	--	--	--	9.32	(6.50, 13.36)	<.001
Insufficient staffing	.11	(.08, .14)	<.001	1.94	(1.60, 2.36)	<.001	36.30	(28.42,46.26)	<.001
Interpersonal differences	.12	(.09, .16)	<.001	--	--	--	13.21	(10.54,16.55)	<.001
Lack of advancement opportunity	.12	(.09, .16)	<.001	--	--	--	10.67	(8.35, 13.63)	<.001
Lack of collaboration/ communication	.12	(.09, .16)	<.001				12.43	(9.46, 16.34)	<.001
Lack of good management	.12	(.09, .15)	<.001	1.3	(1.07, 1.46)	.006	24.11	(19.62,29.63)	<.001
Laid off	.12	(.09, .16)	<.001	.20	(.13, .32)	<.001	2.43	(1.45, 4.07)	.001
Length of commute	.12	(.09, .16)	<.001	--	--	--	6.88	(4.91, 9.64)	<.001
Patient population	.11	(.09, .15)	<.001	2.47	(1.64, 3.72)	<.001	16.74	(11.13,25.18)	<.001
physical demands	.11	(.08, .14)	<.001	2.70	(2.05, 3.55)	<.001	32.79	(25.15,42.74)	<.001
Relocation	.12	(.09, .16)	<.001	.27	(.19, .39)	<.001	1.99	(1.40, 2.84)	<.001
scheduling	.12	(.09, .16)	<.001	--	--	--	12.90	(10.33,16.10)	<.001
educational program	.12	(.09, .16)	<.001	.41	(.23, .73)	.003	2.84	(1.60, 5.05)	<.001
Spouse employment opportunities	.12	(.09, .16)	<.001	.34	(.20, .59)	<.001	2.32	(1.30, 4.12)	.01
Stressful work environment	.11	(.08, .15)	<.001	1.77	(1.51, 2.07)	<.001	43.96	(35.74, 54.07)	<.001
Sign-on bonus	--	--	--	.04	(.04, .05)	<.001	.47	(.31, .71)	<.001
other	.12	(.09, .16)	<.001	.30	(.21, .42)	<.001	2.92	(2.02, 4.23)	<.001

[*]Adjusted for age, race, sex, highest degree, and years of experience. All columns include emergency nursing status as independent variable. Columns 1 and 2 are estimates from the same model, Column 3 depicts results from the full adjusted model.