

## ORIGINAL RESEARCH

# Job Burnout, Stress, and Satisfaction among Emergency Nursing Staff after Health System Transformation Plan in Iran

Nader Tavakoli<sup>1</sup>, Seyed Hosein Shaker<sup>1</sup>, Siamak Soltani<sup>2</sup>, Mohsen Abbasi<sup>1</sup>, Milad Amini<sup>3</sup>, Ali Tahmasebi<sup>3</sup>, Seyed Mohammad Hosseini Kasnavieh<sup>1\*</sup>

1. Department of Emergency Medicine, Iran University of Medical Sciences, Tehran, Iran.

2. Department of Forensic Medicine, Iran University of Medical Sciences, Tehran, Iran.

3. Trauma and Injury Research Center, Iran University of Medical Sciences, Tehran, Iran.

Received: May 2018; Accepted: July 2018; Published online: 13 July 2018

**Abstract:** **Introduction:** Job burnout, stress, and satisfaction are linked to quality of care, patient outcomes and retention of staff. This study was conducted to determine the mentioned issues among emergency nurses. **Methods:** This cross-sectional study was conducted on all nurses working in the emergency departments of 10 hospitals in Tehran, Iran, in 2017. Standard questionnaires were used for gathering the data of participants regarding job burnout, stress, and satisfaction. **Results:** 709 (90%) participants returned the completed questionnaires (58.9% female). The mean age of the nurses was 33 (SD = 7) years. The level of job burnout was moderate in 76.1%, low in 22.5%, and high in 1.4% of the nurses. The level of burnout in the married nursing staff was lower than single nurses ( $3.78 \pm 0.98$  versus  $4.14 \pm 0.58$ ,  $p = 0.049$ ). The level of job satisfaction was moderate in 61.1%, low in 22.2%, and high in 16.7%. There was a significant correlation between age and job satisfaction ( $p = 0.027$ ,  $r = 0.3$ ). Job burnout was directly correlated with job stress ( $p \leq 0.001$ ,  $r = 0.57$ ) and job burnout was negatively correlated with job satisfaction ( $p = 0.001$ ,  $r = -0.41$ ). **Conclusion:** More than 60% of the studied emergency nurses had moderate levels of job burnout, stress, and satisfaction. Job burnout had a direct correlation with job stress and indirect correlation with job satisfaction. Planning to reduce burnout of the emergency nursing staff seems to be necessary.

**Keywords:** Burnout, Professional; occupational Stress; Job Satisfaction; nurses; emergency responders; hospitals

© Copyright (2018) Shahid Beheshti University of Medical Sciences

**Cite this article as:** Tavakoli N, Shaker Seyed H, Soltani S, Abbasi M, Amini M, Tahmasebi A, Kasnavieh Seyed M. Job Burnout, Stress, and Satisfaction among Emergency Nursing Staff after Health System Transformation Plan in Iran. *Emergency*. 2018; 6(1): e41.

## 1. Introduction

Emergency nursing staff deal with life and death situations every day and they have to provide skilled, quality care for patients (1). High patient loads, long shifts, demanding physicians, a fast-paced environment, and working in an environment with emotional and physical challenges can cause problems for nurses in the emergency department (2). One critical problem in the modern working environments is job burnout, which has become preva-

lent dramatically over the past decade (3, 4). Although job burnout may occur in any job, it can be more common in jobs that are related to helping people (such as health department staff) (5-7) and among health department staff, nurses are more at risk of job burnout than others (8). The effects and consequences of burnout can be examined from three aspects including the nurse, client (patient), and organization (9). The cost of nursing turnover (due to burnout) can reach as high as 150% of an employee's annual compensation. This can cause a decrease in safety of patients (10), raising the patient's negative attitude towards the nursing staff (11), and decreasing the quality of healthcare (12).

Patient satisfaction can also be related to job burnout among the hospital staff and thus, should be considered. Higher levels of job satisfaction among nurses have been positively

\*Corresponding Author: Seyed Mohammad Hosseini Kasnavieh. Rasoul Akram Hospital, Niaiesh St, Satarkhan St, Tehran, Iran. Email: hosseinikasnavieh.sm@iums.ac.ir Phone number: 00982166539233



linked to improved quality of care, patient outcomes (13) and retention of staff (14).

Job stress is also serious among helping professions (15). Some of the stressors in the emergency department include aggression and violence at work (16), work overload (17) and others.

Given that national projects such as the Health System Reform Plan are being implemented in Iran (the plan has increased the workload among nurses) and since there is a shortage of nursing staff in Iran, addressing these issues appears to be of great importance. This study was conducted to determine the status of job burnout, stress, and satisfaction and their relationship.

## 2. Methods

### 2.1. Study design and setting

This prospective cross-sectional study was conducted in March 2017 in ten public educational hospitals of Tehran, Iran. The ten hospitals were general public hospitals affiliated to Iran University of Medical Sciences and were among the most important hospitals in affiliation with this university. The necessary permissions were obtained from the Medical Ethics Committee (IR.IUMS.REC 1394. 27240). Moreover, the subjects were assured of the right to withdraw from participation at any time and confidentiality of their responses.

### 2.2. Participants

Using census sampling, all nursing staff members working in the emergency departments of the above-mentioned hospitals were included for being evaluated regarding the purposes of this study. A total of 788 nurses were employed in the emergency departments of the ten hospitals.

### 2.3. Data gathering

Four questionnaires were used in this study. At the beginning of the first questionnaire, the objectives of the study were generally explained to the respondents.

In the first questionnaire, demographic information of the nurses such as age, sex, marital status, education level, employment type and work experience was questioned. An assessment of burnout was made using the Maslach Burnout Inventory (MBI) (18). MBI is the most widely used measure of burnout, which consists of 22 questions relating to the three components of burnout; emotional exhaustion, depersonalization and personal accomplishment. All items were scored on a seven-point rating scale (1= never, 7 = every day). Higher scores indicate higher levels of burnout. Previous research using MBI among nurses suggests that it is highly reliable (e.g., Laschinger & Leiter, 2006, reported Cronbach's  $\alpha$  level

of 0.91 for emotional exhaustion and 0.80 for depersonalization) (19).

The hospital stress scale (HSS-35) was used to measure job stress. The scale consisted of 35 items, which were scored based on a 5-point Likert scale, allocated points were: never (score 1), rarely (score 2), sometimes (score 3), mostly (score 4) and always (score 5). The mean scores represented the measured stress levels, which ranged from 1 to 5, with 1 being desirable (insignificant stress) and 5 being undesirable (severe stress). The reliability and validity of the scale developed by Badiqi et al. have been confirmed and the scale has been frequently used in numerous studies in Iran (20, 21).

The Job Descriptive Index (JDI) scales was used for measurement of job satisfaction (22). The JDI measures five areas of a job to assess satisfaction: type of work, payment, promotion opportunities, supervision, and co-workers. The JDI has been the target of numerous validation and reliability studies. All of the scales are reported to have corrected split-half internal consistency coefficients exceeding 0.80, and average test-retest reliabilities of 0.57 (23). An individual acted as an interviewer in this study, who received preliminary trainings.

### 2.4. Statistical Analysis

The data of the questionnaires were coded and then analyzed via SPSS software version 21 in two levels of descriptive and analytical statistics. In descriptive statistics, parameters such as frequency, frequency percentage, and standard deviation were used. To conduct analytical tests, tests such as the independent samples test as well as one-way ANOVA were used, whereas the Pearson Correlation coefficient was used to examine the relationship between the three variables including job burnout, stress, and satisfaction. The significance level in all the analytical tests was 0.05.

## 3. Results

### 3.1. Baseline characteristics of studied nurses

788 nursing staff members working in the emergency department of the 10 surveyed hospitals were questioned. 709 (90%) participants returned the completed questionnaires (58.9% female, 65.3% married). The mean age of the nurses was 33 (SD = 7) years and 57.4% were in the range of 23-32 years. With regard to work experience, 48.4% of the nurses had 1-7 years of experience with the mean work experience of 9 (SD = 7) years. Most of the nursing staff members (55.7%) had undergraduate education. Other demographic characteristics are presented in Table 1.

### 3.2. Job burnout

The level of job burnout was moderate in 76.1%, low in 22.5%, and high in 1.4% of the nurses. The only demographic vari-



**Table 1:** Baseline characteristics of the studied nurses

Variables	Number (%)
<b>Sex</b>	
Female	418 (58.9)
Male	291 (41.1)
<b>Age (year)</b>	
23-32years	406 (57.4)
33-42years	230 (32.4)
43-54 years	73 (10.3)
<b>Marital status</b>	
Single	246 (34.7)
Married	463 (65.3)
<b>Educational level</b>	
Diploma	142 (20)
Associate Degree	142 (20)
Bachelor's degree	395 (55.7)
Master's degree	21 (2.9)
PhD	10 (1.4)
<b>Employment status</b>	
Permanent	172 (24.2)
Fixed-term	57 (8.1)
Contractual	412 (58.1)
Casual	46 (6.5)
Corporate	23 (3.2)
<b>Work experience (year)</b>	
1-7	343 (48.4)
8-14	211 (29.7)
15-21	100 (14.1)
22-28	55 (7.8)

able related to job burnout was the marital status (table 2). The level of burnout in the married nursing staff was lower than single nurses ( $3.78 \pm 0.98$  versus  $4.14 \pm 0.58$ ,  $p = 0.049$ ).

### 3.3. Job stress

The level of job stress was moderate in 80.3%, low in 10.5%, and high in 9.2% of the nurses. The relationship between job stress and demographic characteristics has been investigated in table 2. No significant relationship was found between job stress and demographic characteristics ( $P$ -value > 0.05).

### 3.4. Job satisfaction

The level of job satisfaction was moderate in 61.1%, low in 22.2%, and high in 16.7% of the nurses. The relationship between job satisfaction and demographic characteristics showed that age had a significant relationship with job satisfaction ( $p = 0.039$ ). There was a significant and positive correlation between age and job satisfaction score ( $p = 0.027$ ,  $r = 0.3$ ). Job satisfaction increased with increase in age, as was also confirmed by post hoc tests. However, other demographic variables did not show any significant relationship with job satisfaction (Table 2).

### 3.5. Correlation of job stress, satisfaction, and burnout

Examining the relationship between the main variables showed a significant correlation between the three main variables. Job burnout was directly correlated with job stress so that burnout rate increased with job stress increasing ( $p \leq 0.001$ ,  $r = 0.57$ ). On the other hand, job burnout was negatively correlated with job satisfaction, indicating that with increase in the level of job satisfaction, the rate of burnout decreased ( $p = 0.001$ ,  $r = -0.41$ ). There was a negative correlation between job satisfaction and job stress ( $p \leq 0.001$ ,  $r = -0.43$ , table 3).

## 4. Discussion

The findings showed that more than 60% of the studied emergency nurses had moderate levels of job burnout, stress, and satisfaction. Significant correlation was found between job burnout and marital status, as well as job satisfaction and older age. Job burnout had direct correlation with job stress and indirect correlation with job satisfaction.

There is a shortage of nursing staff around the world and Iran is no exception. According to a census (2014), Iran (with a population of 75 millions) requires about 240000 nursing staff; however, the number of nursing staff in Iran now is about 100000 (24). Majidi et al. (2017) concluded that the number of patients referred to the emergency department has increased following the implementation of the Health System Reform Plan (25). In such a situation, maintenance of human resources in hospitals was a priority and nurses who were pioneers in terms of providing services to patients were exposed to high workload and consequently burnout and dissatisfaction. In support of this claim, Nakhai et al. in 2017 indicated that the low level of nursing staff satisfaction with the Health System Reform Plan was due to the increase in the number of patients (26). Hence, an investigation of job burnout seems to be of essence. Aiken et al. proved that each additional patient per nurse was associated with a 23% increase in the odds of burnout and 15% increase in the odds of job dissatisfaction (6). In the emergency departments of the hospitals evaluated in this study, a large number of nursing staff had a low and moderate level of burnout and only 1.4% of the nursing staff had a high level of burnout. Despite the fact that a small number of nurses reported high burnout levels, 76% of nurses revealed a moderate level of burnout and this should receive more attention. There are similarities and differences between the findings in this study and the results of some other studies. Like the current study, some studies announced a moderate level of burnout. In 2016, Tarcan et al. surveyed 250 emergency service staff. In this study, the burnout level was evaluated to be moderate (27). Job burnout had a significant relationship with the employ-



**Table 2:** Relationship of job burnout, stress and satisfaction with demographic variables of the nursing staff

Variable	Stress	P	Satisfaction	P	Burnout	P
<b>Sex</b>						
Female	3.03 ± 0.49	0.66	2.95 ± 0.66	0.75	4.01 ± 0.82	0.3
Male	2.98 ± 0.44		2.9 ± 0.63		3.79 ± 0.98	
<b>Marital Status</b>						
Single	3.04 ± 0.32	0.554	3.1 ± 0.63	0.134	4.14 ± 0.58	0.049
Married	2.98 ± 0.52		2.85 ± 0.64		3.78 ± 0.98	
<b>Educational level</b>						
Diploma	3.16 ± 0.45		2.79 ± 0.76		3.83 ± 0.99	
Associate Degree	2.93 ± 0.53		2.8 ± 0.62		4.12 ± 4.12	
Bachelor	2.98 ± 0.46	0.362	3.01 ± 0.62	0.635	3.91 ± 3.91	0.48
MA	3.51 ± 0.61		2.54 ± 0.61		4.91 ± 4.91	
PhD	2.77 ± NA		2.61 ± NA		4 ± NA	
<b>Age (year)</b>						
23-32	3.04 ± 0.45		2.9 ± 0.61		3.97 ± 0.71	
33-42	2.97 ± 0.52	0.582	2.86 ± 0.66	0.039	3.79 ± 1.05	0.61
43-54	2.97 ± 0.55		3.53 ± 0.43		3.62 ± 1.09	
<b>Work experience (year)</b>						
1-7	3.07 ± 0.51		2.86 ± 0.66		4.14 ± 0.87	
8-14	2.91 ± 0.5	0.704	2.95 ± 0.58	0.119	3.72 ± 0.72	0.184
15-21	3.02 ± 0.26		2.88 ± 0.76		3.45 ± 1.26	
22-28	2.86 ± 0.67		3.61 ± 0.42		3.67 ± 1.02	

**Table 3:** Correlation between job burnout, job stress, and job satisfaction among studied nurses

Variables	Stress	Satisfaction	Burnout
<b>Stress</b>			
Correlation	1	-0.43	0.57
P-value	—	≤0.001	≤0.001
<b>Satisfaction</b>			
Correlation	-0.43	1	-0.41
P-value	≤0.001	—	0.001
<b>Burnout</b>			
Correlation	0.57	-0.41	1
P-value	≤0.001	0.001	—

ees' marital status and the level of burnout in single employees was higher than that in married ones. Many studies have counted being single as a risk factor for burnout in nurses (27-30). Seo et al. found that single nurses are 6 times more likely than married nurses to feel burnout (31). According to the findings of this study, there was a significant relationship between the nursing staff's age and job satisfaction and their job satisfaction improves with increase in age. This result was in line with the findings of two other studies, both of which were carried out on nurses at the emergency department (27, 32). According to the findings, burnout had a significant reverse correlation with job stress. Such a relationship is confirmed by various studies in different fields (28, 33, 34). A point to be noted is that high level of job stress among the staff does not necessarily imply having burned out staff. Various investigations have shown that job satisfaction plays a critical role in moderating the effect of stress on resulting in

job burnout (30).

Job burnout had a significant and inverse correlation with job satisfaction of the nursing staff in the emergency departments so that burnout rates increased linearly with a decrease in job satisfaction. A majority of studies had found similar results to the findings of this study (27-29, 32, 34).

## 5. Conclusion

The findings showed that more than 60% of studied emergency nurses had moderate levels of job burnout, stress, and satisfaction. A significant correlation was found between job burnout and marital status, and also between job satisfaction and nurses' older age. Job burnout had direct correlation with job stress and indirect correlation with job satisfaction. Planning to reduce burnout of the emergency nursing staff seems to be necessary.



## 6. Appendix

### 6.1. Acknowledgements

None.

### 6.2. Author contribution

All authors made substantial contributions, revised the manuscript, and approved the final version for publication. Tavakoli N, Hosseini Kasnavieh S M, Soltani S and Abbasi M: Conception and design of the study. Amini M: analysis. Tahmasebi A: Data collection. Amini M and Hosseini Kasnavieh S M: First draft writing and preparing illustrations.

### 6.3. Funding/Support

None.

### 6.4. Conflict of interest

None to Declare.

## References

- Jonsson A, Halabi J. Work related post-traumatic stress as described by Jordanian emergency nurses. *Accident and emergency nursing*. 2006;14(2):89-96.
- Well E, First F, Dignity P, it Out W, Training CB. Stress in emergency departments: experiences of nurses and doctors. *Emergency nurse*. 2011;19(4).
- Canadas-De la Fuente GA, Vargas C, San Luis C, Garcia I, Canadas GR, Emilia I. Risk factors and prevalence of burnout syndrome in the nursing profession. *International Journal of Nursing Studies*. 2015;52(1):240-9.
- Lorenz V, Benatti M, Sabino M. Burnout and stress in nurses in a university hospital of great complexity. *Rev Lat Am Enferm*. 2010;18:1084-91.
- Chiron B, Michinov E, Olivier-Chiron E, Laffon M, Rusch E. Job satisfaction, life satisfaction and burnout in French anaesthetists. *Journal of Health Psychology*. 2010;15(6):948-58.
- Aiken LH, Clarke SP, Sloane DM, Sochalski J, Silber JH. Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction. *Jama*. 2002;288(16):1987-93.
- Maslach C, Schaufeli WB, Leiter MP. Job burnout. *Annual review of psychology*. 2001;52(1):397-422.
- Khamisa N, Peltzer K, Illic D, Oldenburg B. Work related stress, burnout, job satisfaction and general health of nurses: A follow-up study. *International journal of nursing practice*. 2016;22(6):538-45.
- Eriksson U-B, Starrin B, Janson S. Long-term sickness absence due to burnout: absentees' experiences. *Qualitative health research*. 2008;18(5):620-32.
- Halbesleben JR, Wakefield BJ, Wakefield DS, Cooper LB. Nurse burnout and patient safety outcomes: nurse safety perception versus reporting behavior. *Western Journal of Nursing Research*. 2008;30(5):560-77.
- Bakker AB, Schaufeli WB, Sixma HJ, Bosveld W, Van Dierendonck D. Patient demands, lack of reciprocity, and burnout: A five-year longitudinal study among general practitioners. *Journal of Organizational Behavior*. 2000;425-41.
- Owens JA. Sleep loss and fatigue in healthcare professionals. *The Journal of perinatal & neonatal nursing*. 2007;21(2):92-100.
- Adams A, Bond S. Hospital nurses' job satisfaction, individual and organizational characteristics. *Journal of advanced nursing*. 2000;32(3):536-43.
- Newman K, Maylor U, Chansarkar B. The nurse retention, quality of care and patient satisfaction chain. *International Journal of Health Care Quality Assurance*. 2001;14(2):57-68.
- Siegrist J, Shackelton R, Link C, Marceau L, von dem Kneesebeck O, McKinlay J. Work stress of primary care physicians in the US, UK and German health care systems. *Social science & medicine*. 2010;71(2):298-304.
- Gates DM, Gillespie GL, Succop P. Violence against nurses and its impact on stress and productivity. *Nursing economics*. 2011;29(2):59.
- Wu H, Zhao Y, Wang J-N, Wang L. Factors associated with occupational stress among Chinese doctors: a cross-sectional survey. *International archives of occupational and environmental health*. 2010;83(2):155-64.
- Maslach C, Jackson S. *Maslach Burnout Inventory-Human Services Survey (MBBHSS)*. C Maslach, SE Jackson & MP Leiter, MBI Manual (3rd ed) Mountain View, CA: CPP. 1996.
- Laschinger HKS, Leiter MP. The impact of nursing work environments on patient safety outcomes: The mediating role of burnout engagement. *Journal of Nursing Administration*. 2006;36(5):259-67.
- Rajaei M, Haghghi H, Dadipoor S, Fallaghi S, Salimi M, SareghiBrojeni M, et al. Relationship between occupational stress and job satisfaction among Iranian obstetricians. *Bimonthly Journal of Hormozgan University of Medical Sciences*. 2013;17(3):249-55.
- Badaghi M. *Healthcare Job Stress Questionnaire*. AzmoonyarPooya institute. 2010.
- Kendall L, Hulin C. *The measurement of satisfaction in work and retirement*. Jakarta: Pustaka Binaman Pressindo. 1969.
- Schneider B, Dachler HP. A note on the stability of the Job Descriptive Index. *Journal of Applied Psychology*. 1978;63(5):650.
- Valizadeh L, Zamanzadeh V, Habibzadeh H, Alilu L, Gille-



- spie M, Shakibi A. Experiences of Iranian nurses that intent to leave the clinical nursing: a content analysis. *Journal of caring sciences*. 2016;5(2):169.
25. Majidi A, Mahmoodi S, Adineh VH. An Epidemiologic Study of Emergency Department Visits before and after Executing Health Sector Evolution Plan; a Brief Report. *Iranian Journal of Emergency Medicine*. 2017;4(3):130-4.
26. Nakhaei Z, ABDOLREZA GZ, Jalalmanesh S. A SURVEY ON NURSES'SATISFACTION CONCERNING THE HEALTH SYSTEM REFORM PLAN IN HOSPITALS AFFILIATED TO BIRJAND UNIVERSITY OF MEDICAL SCIENCES IN 2016. 2017.
27. Tarcan GY, Tarcan M, Top M. An analysis of relationship between burnout and job satisfaction among emergency health professionals. *Total Quality Management & Business Excellence*. 2017;28(11-12):1339-56.
28. Park S-A, Ahn S-H. Relation of compassionate competence to burnout, job stress, turnover intention, job satisfaction and organizational commitment for oncology nurses in Korea. *Asian Pac J Cancer Prev*. 2015;16(13):5463-9.
29. Akman O, Ozturk C, Bektas M, Ayar D, Armstrong MA. Job satisfaction and burnout among paediatric nurses. *Journal of nursing management*. 2016;24(7):923-33.
30. Ramirez AJ, Graham J, Richards M, Gregory W, Cull A. Mental health of hospital consultants: the effects of stress and satisfaction at work. *The Lancet*. 1996;347(9003):724-8.
31. Seo H-S, Kim H, Hwang S-M, Hong SH, Lee I-Y. Predictors of job satisfaction and burnout among tuberculosis management nurses and physicians. *Epidemiology and health*. 2016;38.
32. Tarcan M, Hikmet N, Schooley B, Top M, Tarcan GY. An analysis of the relationship between burnout, socio-demographic and workplace factors and job satisfaction among emergency department health professionals. *Applied nursing research*. 2017;34:40-7.
33. Khamisa N, Oldenburg B, Peltzer K, Illic D. Work related stress, burnout, job satisfaction and general health of nurses. *International journal of environmental research and public health*. 2015;12(1):652-66.
34. Amponsah-Tawiah K, Annor E, Arthur BG. Linking commuting stress to job satisfaction and turnover intention: The mediating role of burnout. *Journal of Workplace Behavioral Health*. 2016;31(2):104-23.

