

# A Structural Equation Modeling of the Relationship Between Occupational Stress and Job Performance in Health Care Workers

SIAVASH ETEMADINEZHAD<sup>1</sup>, SEYED EHSAN SAMAEE<sup>2</sup>, JAMSHID YAZDANI CHARATTI<sup>3</sup>, ZEINAB MOHAJER ASTARABADI<sup>4\*</sup>

<sup>1</sup>Associate Professor, Department of Occupational Health, Mazandaran University of Medical Sciences, Sari, Iran;

<sup>2</sup> PhD Student, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran;

<sup>3</sup>Associate Professor, Department of Biostatistics, Mazandaran University of Medical Sciences, Sari, Iran;

<sup>4</sup>MSc of Ergonomic, Department of Occupational Health, Mazandaran University of Medical Sciences, Sari, Iran.

Received March 07, 2017; Revised December 20, 2017; Accepted February 21, 2018

This paper is available on-line at <http://ijoh.tums.ac.ir>

## ABSTRACT

Healthcare workers (HCWs) suffer from occupational stress. This stress has adverse effects on individual and organization. This factor can be impose irreparable damage to the health care organizations and ultimately reduce job performance. The aim of this study was to investigate the effect of occupational stress on the performance of HCWs. This descriptive-analytical study was conducted in 2017, by-census on 400 health-care workers of one of the public hospitals in Gorgan, Iran. Data was collected using Osipow's Occupational Stress Questionnaire and Paterson's Job Performance Questionnaire. Descriptive, analytical statistics and Structural Equation Modeling (SEM) was analyzed by SPSS v. 22 and LISREL 8.72. The highest and lowest effect of stressful factors on job performance were related to physical environment ( $\beta=0.89$ ,  $p<0.001$ ) and the role insufficiency ( $\beta=0.43$ ,  $p<0.001$ ) respectively. The overall dimensions of occupational stress explained 73% of changes in the variance of job performance of HCWs (R-squared=0.73). One of the important interventions can be focusing on the improvement of the physical conditions of the workplace and maintaining this at standard levels.

**KEYWORDS:** *Occupational stress, Job Performance, Health care workers*

## INTRODUCTION

Occupational stress is a psychological, physical and behavioral response that occurs when the job conditions do not match with the capabilities, facilities or requirements of the worker [1]. According to the NIOSH statistics, one-fourth of workers consider their jobs as one of the stressors in lifetime [2]. Occupational stress is a growing problem around the world which has a deleterious effect on a wide range of physical and mental health outcomes [2].

In this regards, from the consequences related to the occupational stress; depression, anxiety, frustration, isolation and restlessness can

be noted [3]. The factors such as organizational changes, communication with colleagues, work characteristics, salary and wage and declined manpower can increase the level of occupational stress [4-5]. Also, for workers who are exposed to higher occupational stress, symptoms such as alcohol consumption, indifference to work, and reduced incentive for working appear to be dominant [5-6].

Healthcare workers (HCWs) almost persistently suffer from occupational stress [7]. Studies have shown that 7.4% of the HCWs had absenteeism each week due to disability caused by stress, which is 80% more than other occupational groups [8]. Symptoms appearing in stressful situations may include mental, physical, and behavioral disorders that are usually developed by

*Corresponding author: Zeinab Mohajer*

*Email: [zinat.mohajer@yahoo.com](mailto:zinat.mohajer@yahoo.com)*

occupational stress [7, 9]. Likewise, the research has highlighted that factors such as prolonged contact with patients, having heavy responsibilities, performing clinical processes, communicating with dying patients, dealing with emergency conditions and working long-term night shifts are the main stressors for HCWs. Continuous exposure to these factors, can reduce the quality of patient care and induce fatigue, depression and absenteeism of HCWs [10-11]. Neglecting the consequences of occupational stress can impose irreparable damage to the organization's human resources and ultimately decline the workers' performance [11-12].

The results from the study conducted by Haidari (2013) showed that the occupational, individual and organizational stressors had the massive impact on HCWs' job performance [12]. Undoubtedly, identifying and evaluating the root causes of occupational stress in HCWs, can serve as an efficient tool for enhancing the productivity and preventing burnout [9, 13]. Based on evidence provided by Santiago, the occupational stress along with job dissatisfaction can reduce the working ability [14].

Due to the important role of the occupational stress in HCWs and lack of studies for determining the association of stressors in the form of a conceptual model, the present study was designed to identify the potential stressors and determine their relationship with HCW's job performance in the form of Structural Equation Modeling (SEM).

## MATERIALS AND METHODS

**Study design:** This descriptive-analytical study was conducted among HCWs in one of the public hospitals in Gorgan (May to September 2017). The statistical population included all HCWs in this hospital. In general, in SEM, the sample size can determine with 5 or 10 observations per each parameter (number of questions of questionnaire)

$$5q \leq n \leq 15q$$

Where  $q$  is the number of question of questionnaire and  $n$  is the sample size [15]. Accordingly, with regard to the number of questions in Occupational Stress and Job Performance Questionnaire (75 questions), 400 HCWs were selected as the sample size by census method in different wards of the hospital. The inclusion criteria for the HCWs were full-time job, not having a second job, not having specific physical and mental problems (based on self-expression) and at least one year of work experience in the current employment. The

exclusion criteria were no responding or incomplete questionnaires.

### **Data collection tool:**

A) *The demographic information and organizational characteristics* included age, gender, section or workplace, total work experience, and education level of HCWs.

B) *The Osipow's Occupational stress questionnaire* was first used by Osipow et al. in 1987. This questionnaire measures the occupational stress in six dimensions (role overload, role insufficiency, role ambiguity, role boundary, responsibility and physical environment). Each dimension contains 10 questions. The response format of this questionnaire, is based on a 5-point Likert-type scaling (never, rarely, sometimes, often and always) and the relevant scores are determined based on the instructions of the Osipow questionnaire. The validity and reliability of this questionnaire have been examined in numerous internal studies (in Iran) and the results indicated the desirable validity of this questionnaire [16, 17].

C) *The Paterson's Job Performance Questionnaire* was used to survey the job performance. This questionnaire has 15 questions which measure the performance of workers in terms of their job and organizational responsibilities [18]. Each question of a four-state scale from rarely (1) to always (4) has been formed. The maximum score in this questionnaire is 60 and the minimum score is 15. The reliability of this questionnaire was verified in Vosoughi study (with Cronbach's alpha 0.86) [19].

**Ethical considerations:** This study was approved by the Ethics Committee of Mazandaran University of Medical Sciences (IR.MAZUMS.REC.96.2826).

**Data collection:** having obtained the prior permission from Mazandaran University of Medical Sciences, the researchers went to hospital in various work shifts, in order to access and collect the data about all HCWs.

**Statistical analysis:** Descriptive and analytical statistics was performed to summarize the data. Also, the SEM was used to investigate the relationship between the hidden variables and observed variables and SPSS22 and LISREL 8.72 were used to analyze the data. The significance level was  $p < 0.05$ .

## RESULT

The information of demographic and organizational variables of HCWs is listed in Table 1.

**Table 1.** Information of demographic and organizational variables of HCWs (n=400)

Variables	Category	Frequency	%
Gender	Female	220	55.00
	Male	180	45.00
Marital status	Married	263	65.75
	Single	137	34.25
Age (year)	20-29	152	38.00
	30-39	153	38.25
	40-49	86	21.50
	≥50	9	2.25
	5	142	35.00
Work experience (year)	5-10	58	14.75
	10-15	115	28.75
	>15	84	21.00

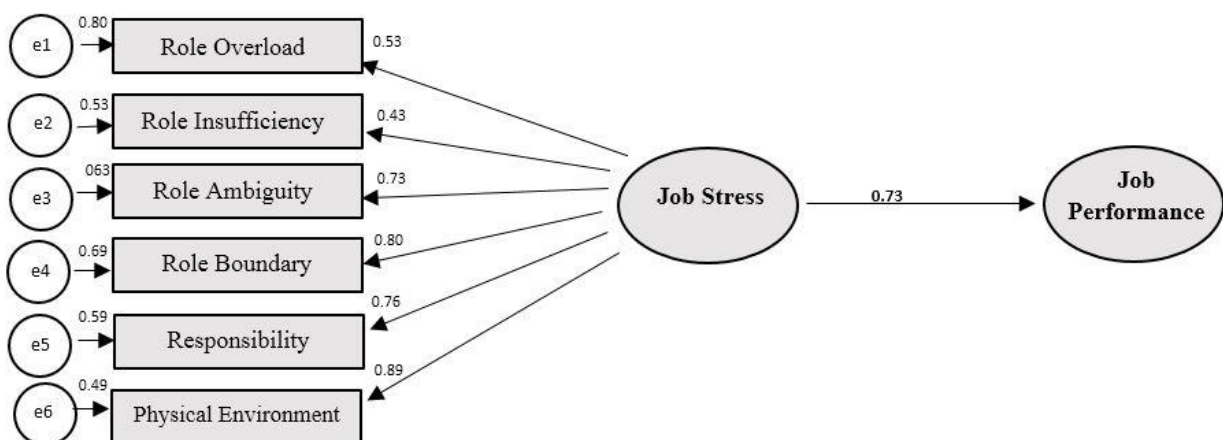
The mean and standard deviation of occupational stress dimensions and job performance is showed in Table 2. Since in SEM, the data should follow a normal distribution [15], the Kolmogorov-Smirnov test was employed. Considering that the test value was more than 0.05, the variables were considered normal. Therefore parametric tests and SEM can be used to explain the model (Table 2).

**Examining the research hypotheses:** The results of SEM indicated that standardized coefficients ( $\beta$ ) of occupational stress questionnaire

and job performance questionnaire was higher than 0.04, indicating the influential effects of occupational stress dimensions on job performance (Fig. 1). Also, t-value was obtained to be 5.24, which is larger than the critical value (because the t-value was not within the range of -1.96 to +1.96). This indicates that the standardized coefficients of regression are significant. Therefore, with 95% confidence, there is a significant relationship between the stressor and the HCW's performance (Fig.2).

**Table 2.** Mean and standard deviation questionnaire items reported by HCWs (n=400)

Item	Mean	SD	Variance	Kolmogorov-Smirnov	
Occupational Stress	Role Overload (RO)	2.85	0.71	0.50	3.06
	Role Insufficiency (RI)	2.96	0.79	0.62	2.06
	Role Ambiguity (RA)	3.23	0.51	0.26	3.06
	Role Boundary (RB)	3.21	0.47	0.22	3.08
	Responsibility (R)	3.16	0.55	0.30	4.07
Job Performance	Physical Environment (PE)	3.07	0.49	0.24	3.07
	Total	4.06	0.61	0.38	2.58



**Fig.1.** standardized coefficients ( $\beta$ ) of stressors in job performance of HCWs

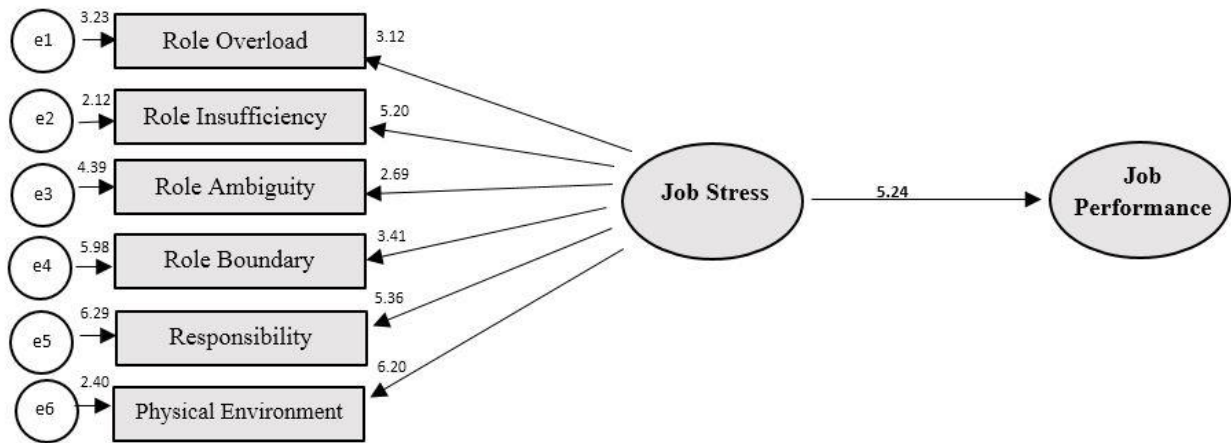


Fig.2. The standard significance coefficient of stressors in job performance of HCWs

**Validation of the research model:**  
 According to result, the  $\chi^2$  was 1.88, which indicates a small difference between the conceptual model and the observed data. The NFI-NNFI-IFI-

CFI index were greater than 0.9; and GFI and AGFI were greater than 0.8. Therefore, the model has an appropriate fit (Table 3).

Table 3. Examining fitness indicators

Fitting indexes	Full name	recommended amount	value	Confirm/Reject
$\chi^2$	Chi-square Divided	-	1186	Confirm
Df	Degrees of Freedom	-	631	Confirm
X <sup>2</sup> /df	Chi-square Divided to Degrees of Freedom	$\chi^2/df < 3$	1.88	Confirm
RMSEA	Root Mean Square Error of Approximation	RMSEA $\leq$ 0.10	0.047	Confirm
GFI	Goodness of Fit Index	GFI > 0.9	0.92	Confirm
AGFI	Adjusted Goodness of Fit Index	AGFI > 0.9	0.96	Confirm
NFI	Normed Fit Index	NFI > 0.9	0.95	Confirm
IFI	Incremental Fit Index	IFI > 0.9	0.97	Confirm
CFI	Comparative Fit Index	CFI > 0.9	0.92	Confirm

The physical environment (with a standard coefficient of 0.89) and the role insufficiency (with a standard coefficient of 0.43) had the highest and lowest impact on the job performance, respectively. The coefficient of determination for the job performance variable was estimated as 73% (R-

squared=0.73), which is the indication of the fact that all dimensions of occupational stress (6 dimensions) were able to explain 73% of changes in the job performance (Table 4).

Table 4. Summary of standard coefficient and significance level of the test

	Model	standardized coefficients ( $\beta$ )	t-value	Result
1	Physical Environment → Job Performance	0.89	6.20	confirm
2	Role Boundary → Job Performance	0.80	3.41	confirm
3	Responsibility → Job Performance	0.76	5.36	confirm
4	Role Ambiguity → Job Performance	0.73	2.69	confirm
5	Role Overload → Job Performance	0.53	5.62	confirm
6	Role Insufficiency → Job Performance	0.43	3.12	confirm

R-squared=0.73

## DISCUSSION

In this study, job related stress was evaluated based on the occupational stress questionnaire (with six dimensions). In this regard, the role ambiguity dimension (3.23±0.51) had the

greatest mean among the other dimensions. This is consistent with the results reported by Yousefian et al. (2014) which had been conducted on HCWs of the hospitals in Zahedan. This means that the role ambiguity had the most significant effect on

increasing stress among studied HCWs[20]. HCWs due to the nature of their work, need to have job satisfaction and social support (coworker and supervisor support). If such conditions are not met, the levels of job dissatisfaction and role ambiguity will be escalated for them [21- 22].

Based on the results, a significant relationship was found between the physical environment and job performance. Therefore, this stressor was introduced as the most important factor in the job performance among other stressors. Also, In Zakerian's study (2015) a significant relationship between proper and high quality design of the physical environment and workers' performance was reported. In other words designing an appropriate work environment by considering the individual demands and job satisfaction components, increases the productivity of workers [23]. Moreover, in a study conducted on HCWs in Kermanshah (west of Iran), improving the welfare state and physical environment was suggested for enhancing the performance. [24]. On the other hand, one of the most important effects of an inappropriate physical environment is inflicting physiological challenges on workers. Providing a suitable physical environment is recommended to improve the job performance of workers. The results of psychological research on the impact of the physical conditions of the workplace on the workers' job performance indicated that appropriate physical conditions at the workplace will improve the productivity of workers and enhance their quality of work. [25-28].

The role boundary and role ambiguity as other strong and influential variables related to job performance, was reported in the present study. In this regard, a significant relationship was established between these variables and the HCWs job performance. The cognition of work scopes, tasks and the roles of individual in work environment depends on the lack of dichotomy and ambiguity of the role. Role ambiguity is one of the stressors in the work environment for which the necessary information for performing a job is improper and misleading[29]. In this situation, recognition of the job demands and job authority is disturbed. Increased occupational stress due to role ambiguity and role boundary is associated with decreased job performance as well as job satisfaction, which ultimately contributes to decreased productivity of workers and excessive costs for the organization [30]. The unclear tasks will make the workers disappointed for doing work and accepting responsibility. In these conditions, the decline in productivity will occur.[31]. Having multiple roles is another important complication in many workplaces. This issue requires a detailed description of the roles and selection of appropriate workers, so that they can show their best

performance. Otherwise, the individual do not have a clear description of their roles.[32]. The role contradiction occurs due to the similarity of the roles of HCWs [33]. Kahen et al in their study have specifically addressed the issue of ambiguity of roles. They found that the workers with role ambiguity have higher stress, lower job satisfaction and lower levels of self-esteem. Ambiguity of roles causes lack of clarity about the expectations of a person's role. In this situation, self-confidence is eliminated to perform tasks. Eventually leads to a loss of performance and productivity in workers. [34].

Based on the results, responsibility was reported as the third most influential factor in predicting the HCWs job performance. Also, in a study by Shin et al. (2016) on 250 workers in South Korea, a positive and strong relationship was found between the role of responsibility and the occupational performance of workers[35].The HCWs should be responsible for patients due to a significant role that they play in the health system. Thus, one can say that responsibility is an important principle in the provision of nursing care[36, 37]. The responsibility of HCWs is important due to their influential duties. Worker's lack of accountability in the workplace is a big problem for organization, which causes mental stress and reduced job performance. The responsibility of HCWs provides comprehensive health-care services for patients. In addition, it can have a positive effect on the attitude of patients towards providing necessary care in the hospital. The health-care managers should increase the responsibility of HCWs, and take into account patients' expectations and respond to it by best way[38, 39].

Based on the hypotheses of this study, role overload was also introduced as another predictive variable of the job performance. According to the model, the power of the relationship between the role overload and the performance was calculated as 0.80, which is a significant amount. The test statistic was also obtained as 5.62, indicating the significance of the correlation observed. Therefore, with a 95% confidence, there is a relationship between the role overload and job performance, which is consistent with the results of numerous internal and external studies conducted in this regard [40-42]. In explaining this hypothesis, we can say that HCWs faced different situations to do the job. Moreover, factors such as doing tasks with high speed, high workload and lack of support from colleagues and supervisor can cause occupational stress among HCWs. Consequently, the performance and services provided is affected by the this workers.[43, 44]. Hence, the attention of managers to different dimensions of workload in hospital and trying to provide working

environments with minimal stress are suggestions to be made to improve the HCWs job capability.

In this study, the role insufficiency had the lowest power in predicting the HCW's performance. The role insufficiency and role disproportionate with the individual skills in the HCWs are considered as a factor in occupational stress, which can adversely affect the individuals' performance and bring in a lot of direct and indirect costs to the organization. The disparity between worker skills and job title cause unhappiness and stress as well. [30, 42]. In contrary, workers with high skills can expand their job skills and achieve progress and job satisfaction [34]. According to the findings of Siberta et al., a substantial increase had been predicted in job satisfaction and real career progress in the next two years due to high levels of personal initiative and creativity of individuals[45].

**Limitations:** One of the limitations of this study was the use of self-report questionnaires (the psycho-emotional conditions of individuals are one of the determining conditions on how to answer the questions). In addition, the data from this research have been tested with SEM for mere evaluation of relations of occupational stress with job performance. It is suggested to evaluate other variables affecting the HCWs' job performance such as individual, organizational, and other psychosocial variables (such as job satisfaction, burn out etc.), in the future studies.

## CONCLUSION

A significant relationship was established between the stressful variables and the HCWs job performance. In the meantime, the physical environment variable showed the most predictive power for the HCWs' job performance. Accordingly, one of the important interventions can be focused on the improvement of the physical conditions of the workplace and maintaining this condition at standard levels. Ultimately, the success and development of any organization depends on the high occupational performance of the workers. If the organization does not consider the factors which affect the job performance, of the organization productivity would be affected its goals would not be achieve.

## ACKNOWLEDGMENTS

This paper has been extracted from Mrs. Zeinab Mohajer Astarabadi Master's Degree thesis in Ergonomic. This thesis has been supported by Mazandaran University of Medical Sciences, Mazandaran, Iran. The authors thank the HCWs for their cooperation

## REFERENCES

1. Habibi E, Dehghan H, Safari S, Mahaki B, Hassanzadeh A. Effects of work-related stress

- on work ability index among refinery workers. *J Educ Health Promot* 2014;3(18):1-14.
2. Bhui KS, Dinos S, Stansfeld SA, White PD. A synthesis of the evidence for managing stress at work: a review of the reviews reporting on anxiety, depression, and absenteeism. *J Environ Public Health* 2012;2012.
3. Adib-Hajbaghery M, Khamechian M, Alavi NM. Nurses' perception of occupational stress and its influencing factors: A qualitative study. *Iran J Nurs Midwifery Res* 2012;17(5):352-9.
4. Steyn R, Vawda N. Job characteristics: their relationship to job satisfaction, stress and depression. *J Psychol Afr* 2014;24(3):281-4.
5. Gramstad TO, Gjestad R, Haver B. Personality traits predict job stress, depression and anxiety among junior physicians. *BMC Med Educ* 2013;13(1):150-59.
6. Hosseini Z, Hazavehei Mm, Imanzad M, Ghanbarnezhad A, Gharlipour Z. Occupational stress and mental health relationship in nurses. *Adva Nurs & Mid* 2014;23(82):6314-.
7. Nam SJ, Chun HJ, Moon JS, Park SC, Hwang YJ, Yoo IK, et al. Job Stress and Job Satisfaction among Health-Care Workers of Endoscopy Units in Korea. *Clin Endosc* 2016;49(3):266-72.
8. Chen C-K, Lin C, Wang S-H, Hou T-H. A study of job stress, stress coping strategies, and job satisfaction for nurses working in middle-level hospital operating rooms. *J Nurs Res* 2009;17(3):199-211.
9. Samaei SE, Khosravi Y, Heravizadeh O, Ahangar HG, Pourshariati F, Amrollahi M. The effect of emotional intelligence and job stress on burnout: A structural equation model among hospital nurses. *Int J Occup Hyg* 2017;9(2):52-9.
10. Samaei SI, Tirgar A, Khanjani N, Mostafae M, Bagheri Hosseinabadi M, Amrollahi M. Assessment of ergonomics risk factors influencing incidence of musculoskeletal disorders among office workers. *J Health and Saf Work* 2015;5(4):1-12.
11. Portoghese I, Galletta M, Coppola RC, Finco G, Campagna M. Burnout and workload among health care workers: The moderating role of job control. *Saf Health Work* 2014;5(3):152-7.
12. Yang T, Guo Y, Ma M, Li Y, Tian H, Deng J. Job stress and presenteeism among chinese healthcare workers: The mediating effects of affective commitment. *Int J Environ Res Public Health* 2017;14(9):978-92.
13. Noorian C, Parvin N, Mehrabi T. Evaluation of the relationship between occupational stress and general health condition in nurses working in Isfahan university hospitals 2005. *Com Health J* 2010;5(1):45-52.
14. BM D, PB A. Burnout and Coping Strategies in Male Staff from National Police in Valparaíso,

- Chile. *Iran J Public Health* 2013;42(9):950-59.
15. Kline RB. *Principles and Practice of Structural Equation Modeling*. 4 st ed. The Guilford Press.,: New York, USA, 2010.
  16. Hosseinaei A, Ahadi H, Fata L, Heidarei A, Mazaheri MM. Effects of group acceptance and commitment therapy (ACT)-based training on job stress and burnout. *Iran J Psychiatry Clin Psych* 2013;19(2):109-20.
  17. Jenaabadi H, Pilechi L, Salmabadi M, Tayarani Rad A. The effectiveness of training mindfulness skills in professional stress and psychological well-being of female teachers. *Iran Occup Health J* 2017;13(6):58-69.
  18. Paterson DG. The scott company graphic rating scale. *J Pers Res* 1922;1(1):361-76.
  19. Vosoughi NA, Rohollahi A, Mohamad HH. The effect of job stress on general health and job performance on air traffic controllers (atc). *Iran Occup Health J* 2016;13(1):47-57.
  20. Shahrakipour M, Barahoe A, Pirnejad H, Rezavani Amin M, Yosefian Miandoab N, charkhatGorgich E. Job stress components in the operating room staff educational hospitals of Zahedan in 1393. *J Sabzevar Uni Med Sci* 2015;21(6):960-7.
  21. Acker GM. The effect of organizational conditions (role conflict, role ambiguity, opportunities for professional development, and social support) on job satisfaction and intention to leave among social workers in mental health care. *Community Ment Health J* 2004;40(1):65-73.
  22. Ho W-H, Chang CS, Shih Y-L, Liang R-D. Effects of job rotation and role stress among nurses on job satisfaction and organizational commitment. *BMC Health Serv Res* 2009;9(1):8-20.
  23. Zakerian SA, Garosi E, Abdi Z, Bakhshi E, Kamrani M, Kalantari R. Studying the influence of workplace design on productivity of bank clerks. *J Health and Saf Work* 2016;6(2):35-42.
  24. Bakhshi E, Kalantari R, Salimi N. Assessment of job performance and its determinants in healthcare workers in islamabad-e gharb city based on achive model in 2016. *Arak Med Uni J* 2017;20(119):1-9.
  25. Kamarulzaman N, Saleh A, Hashim S, Hashim H, Abdul-Ghani A. An overview of the influence of physical office environments towards employee. *Procedia Eng* 2011;20(1):262-8.
  26. Koinis A, Giannou V, Drantaki V, Angelaina S, Stratou E, Saridi M. The impact of healthcare workers job environment on their mental-emotional health. Coping strategies: the case of a local general hospital. *Health Psychol Res* 2015;3(1):12-7.
  27. Al-Dweik G, Al-Daken LI, Abu-Snieneh H, Ahmad MM. Work-related empowerment among nurses: literature review. *Inter J Pro Qua Manag* 2016;19(2):168-86.
  28. Abedini R, Choobineh A, Hasanzadeh J. Evaluation of effectiveness of mapo and ptai methods in estimation musculoskeletal disorders risk. *Iran Occup Health J* 2013;10(4):33-42.
  29. Rizzo JR, House RJ, Lirtzman SI. Role conflict and ambiguity in complex organizations. *Adm Sci Q* 1970;15(2):150-63.
  30. Hoboubi N, Choobineh A, Ghanavati FK, Keshavarzi S, Hosseini AA. The impact of job stress and job satisfaction on workforce productivity in an iranian petrochemical industry. *Saf Health Work* 2017;8(1):67-71.
  31. Judeh M. Role ambiguity and role conflict as mediators of the relationship between socialization and organizational commitment. *Inter Busi Res* 2011;4(3):171-81.
  32. Zagheri Tafreshi M. Assessing role strain and its related factors in iranian nursing educators: A challenge for educational managers. *Qua J Nur Mana* 2013;2(2):30-40.
  33. Schulz J. The impact of role conflict, role ambiguity and organizational climate on the job satisfaction of academic staff in research-intensive universities in the UK. *Hig Edu Res & Dev* 2013;32(3):464-78.
  34. Mohammadi B. The relationship of role ambiguity with job satisfaction and job performance mediated by proactive behavior. *J Ergo* 2016;4(1):20-7.
  35. Shin I, Hur W-M, Kang S. Employees' perceptions of corporate social responsibility and job performance: A sequential mediation model. *Sustainability* 2016;8(5):493-98.
  36. Neishabory M, Raeisdana N, Ghorbani R, Sadeghi T. Nurses' and patients' viewpoints regarding quality of nursing care in the teaching hospitals of Semnan University of Medical Sciences, 2009. *Koomesh* 2011;12(2):134-43.
  37. Park MY. Nurses' perception of performance and responsibility of patient education. *Taehan Kanho Hakhoe Chi* 2005;35(8):1514-21.
  38. Hassanian ZM, Sadeghi A, Bagheri A, Moghimbeighi A. Nurses' social responsibility and its relationship with their demographic profiles. *Sci J Hamadan Nur & Mid Fac* 2017;25(2):45-53.
  39. Mehmet T. Organizational variables on nurses' job performance in Turkey: Nursing assessments. *Iran J Public Health* 2013;42(3):261-71.
  40. Jehangir M, Kareem N, Khan A, Jan MT, Soherwardi S. Effects of job stress on job performance and job satisfaction. *Inter J Contem Rese Bus* 2011;3(7):453-65.
  41. Khandan M, Roshan zamir S, Maghsoudipour

- M. Survey of workload and job satisfaction relationship in a productive company. *Iran Occup Health J* 2012;9(1):30-6.
42. Omolayo BO, Omole OC. Influence of mental workload on job performance. *Int JI of Hum Social Sci* 2013;3(15):238-46.
43. Gurses AP, Carayon P, Wall M. Impact of performance obstacles on intensive care nurses' workload, perceived quality and safety of care, and quality of working life. *Health Serv Res* 2009 44(2):422-43.
44. Asamani JA, Amertil NP, Chebere M. The influence of workload levels on performance in a rural hospital. *British J Healthc Manag* 2015;21(12):577-86.
45. Seibert SE, Crant JM, Kraimer ML. Proactive personality and career success. *J Appl Psychol* 1999;84(3):416-27.