



Examination of the Occupational Stressors among the Nurses Working in Educational Centers in Urmia

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Abstract: *Introduction: the nurses with a key role in health organizations experience high levels of stress. This reduces the quality of nursing care work; therefore, the study was conducted to examine the occupational stressors among the nurses working in educational centers of Urmia. Materials and Methods: The study is a descriptive research study done on 240 nurses from educational centers of Urmia University of Medical Sciences selected randomly. Data was collected through a questionnaire containing demographic information and Gray-Toft and Anderson's Nursing Occupational Stress Questionnaire. Then, the data was analyzed in SPSS21 and frequency distribution statistical methods. Results: The results showed that 51% of the nurses had high occupational stress, 46% moderate stress and 2.9% low. The most frequent stressors were patients' suffering and death (3.28 ± 0.85), workload (3.14 ± 0.82), uncertainty about treatment (3.11 ± 0.81), conflict with nurses (3.07 ± 0.93), conflict with doctors (3.04 ± 0.88), lack of knowledge (2.73 ± 0.86), and lack of support (2.52 ± 0.95). Discussion and Conclusion: The results indicated that the nurses have high levels of stress; so, it is necessary that all officials pay more attention to the reduction of occupational stresses of this stratum and apply the right methods to tackle this critical issue.*

Keywords: Occupational Stress, Nursing Profession, Stressors.

INTRODUCTION

Occupational stress is currently one of the main health problems and a discussed issue in the 21st Century, which unfortunately threatens the lives of employees, family and quality of life of the individuals. This occurs when the employees observe that the workplace's needs for compliance and adaptation are beyond their capacity and ability (Azad-Marzabadi & Fesharaki, 2016). In the recent decades, the cost of work-related stressors has been estimated to be \$ 4.5 billion per year (Negussie & Kaur, 2016). Previous studies have indicated that occupational stress is so costly for the organizations and healthcare sectors with a significant effect on reducing incentives, job satisfaction, and productivity in the workforce. On the other hand, all occupations have a stress level given their self-employment, and occupational changes can cause stress, such as organizational changes, salary and promotion at work (Abarghouei et al., 2016). Occupational stress has a significant effect on the efficiency and effectiveness of the staff, especially the occupational stress created by health care staff affects the quality of the medical services significantly (Negussie & Kaur, 2016; Abarghouei et al., 2016; Nam et al., 2016; Dagget, Molla & Belachew, 2016). Many studies are done about the occupational stress among health care providers, including doctors and nurses (Nam et al., 2016).

Although occupational stress exists in all occupations, but this is even more important in healthcare personnel dealing with human health (Dagget, Molla & Belachew, 2016; Yahya et al., 2011; Hayes, Douglas & Bonner, 2015). In such a system, the nurses are at the forefront of providing services to patients and given the critical nature of their occupation, they are one of the groups constantly exposed to stress (Ghiyasvandian & Gebra, 2014). Bogaert writes that thirty years of research in the nursing work environment have created the knowledge that nurses are of the greatest health workforce exposed to occupational stress (Van Bogaert et al., 2017) and this has turned into a challenge to the nursing profession (Rosnawati, et al., 2010). Tajvar et al. (2015) showed that the ICU nurses experienced a high level of stress (83.9%), which was significant and could endanger the health of nurses. The studies show that the nurses exposed to stress report a higher level of depression and physical illness (Mark & Smith, 2012). Furthermore, occupational stress leads to delays, absences, and reduced productivity and organizational commitment, conflict among the colleagues, health disorders, job dissatisfaction, reduced creativity, reduced professional satisfaction, reduced on time and proper decision-making, feelings inapt and depressed, anxiety and fatigue, professional vulnerability in professional communication, reduced energy and productivity, reduced quality of nursing care and ultimately dissatisfaction and leaving work (Salilih and Abajobir, 2014; Wang, Kong & Chair, 2011; Jannati, et al., 2011; Cavaleiro, et al., 2008; Dagget, Molla & Belachew, 2016; Negussie & Kaur, 2016). Studies indicate that in the first year of the primary employment, 18 to 50% of newly graduated nurses leave or change their jobs (Wang, Kong & Chair, 2011).

Bahrami et al. (2011) wrote that 7.4% of nurses had absenteeism because of occupational stress each week, which is 80% more than other occupational groups. This might be because of the nature and quality of the nursing job as a nurse has to deal with death and life and well-being of humans. Moreover, the harsh working environment, long working hours, night work shift and high overtime work, conflict between work roles and direct relationship with people suffering and with the death of patients are these issues that are very stressful on their own (Chatzigianni et al., 2018; Haile, 2016; Dall'Ora et al., 2015; Sahraian, et al., 2013; Dagget, Molla & Belachew, 2016). Hence, as occupational stress affects individual and organizational performance as well as health care (Chatzigianni et al., 2018), the researcher tried to conduct a study of occupational stressors among the nurses working in Urmia educational centers. It is hoped that the results of this study might attract the attention of nursing managers and planners to identify occupational stress as job risks and take a small step in improving the quality of nursing care by identifying the adaptive factors with occupational stress and applying them.

Materials and Methods

The study was descriptive done in 2017 in educational centers affiliated to Urmia University of Medical Sciences. The population was all nursing staff working in Imam Khomeini, Imam Reza (AS), Motahari, Taleghani and Shohada hospitals. The sample was 240 nurses where first the qualified nurses were determined and then based on the quota of 240 people, they were randomly assigned to study. Two questionnaires were used in the study: the questionnaire on demographic characteristics of nurses (age, gender, marital status, level of education, employment status, work shift, work experience, work ward) and 2) Gray-Toft and Anderson's (1981) Nursing Occupational Stress. France et al. (2000) revised it to identify stressful states not mentioned in the occupational stress questionnaire, and the final version had 57 questions in 9 areas. They were patient suffering and death (7 questions), conflict with physicians (5 questions), lack of preparation (3 questions), problems in relations with colleagues (6 questions), problems with head nurses (7 questions) lack of support resources (3 questions), nurses' conflict (5 questions), workload (6 questions) and the uncertainty of treatment (5 questions) which were categorized on Likert scale (French & Kaplan, 2003). The content validity was used to determine the validity of the tool. The questionnaire was given to 10 faculty

members of the Faculty of Nursing and Midwifery of University of Urmia. Finally, according to the professors', the number of questions was reduced to 34. Each question has four answers: never, sometimes, often, very much. For each option, the lowest score is one and the highest is four. The total point was from 34 to 136, where each level with less than or equal to 68 was low tension, from 69 to 103 was average, and more or equal to 104 was high. Several studies have examined the reliability of this tool. Farhadi et al. (2013) evaluated the Cronbach's alpha coefficient as 0.96 and in a study conducted by Ghasemi (2011), it is 0.85. In the present study, the reliability was used to determine the scientific reliability of the test-retest method. Correlation coefficient for occupational stress was $r = 0.87$. Data were analyzed using descriptive statistics and analyzed using SPSS 16.

Results

The social demographic characteristics of the subjects were as follows: average age of the nurses were 32.29 with a standard deviation of 7.09 nurses, majority of them were between 26-30 years old. Mostly were female (86.2%) and married (58.8%). (98.3%) of them had a bachelor's degree. Among the nurses, 32.1% had contract job status, 30% official, 22.9% agreement and 15% were project employees. Most nurses (83%) were employed in flexible shifts. The average length of nursing work experience was 7.24 years. The workplace of the subjects was 25.4% in ICU, 18.3% in the internal ward, 17.1 in the surgical ward, 16.7% in the emergency department and the rest in the orthopedic ward and operation room. The results showed that stressful situations for nurses were as follows, 51% of nurses had high occupational stress, 46% moderate and 2.9% had low stress. The most frequent stressors were patients' suffering and death (3.28 ± 0.85), workload (3.14 ± 0.82), uncertainty about treatment (3.11 ± 0.81), conflict with nurses (3.07 ± 0.93), conflict with doctors (3.04 ± 0.88), lack of knowledge (2.73 ± 0.86), and lack of support (2.52 ± 0.95).

Discussion

The study showed that the majority of the subjects (51%) had high stress levels, which is not surprising given the nature of nursing jobs (Gheshlagh et al., 2017). This is in line with many studies. Farhadi (2013) reported that 58.35% of nurses working in ICUs in Urmia have high stress. Zarrin Ghabaee et al. (2016) in Sari showed high stress among nurses. Mvinga's (2015) showed that occupational stress among the nurses in Zambia is 93%, which is significant. McVicar et al. (2016) stated high stress among nurses. Another study by Nam et al. (2016) conducted on occupational stress among doctors and nurses showed that nurses experience higher stress than doctors. However, in some studies, the stress level of nurses was low to moderate (Hashemi & Garshad, 2012; Zeghami & Asgharzadeh, 2011; Bahrami et al., 2011). Al Hosis et al. (2013) stated the stress level of nurses in Saudi Arabia as moderate. To explain this contradiction, one can state the organizational and managerial structures. The present study showed that the death of a patient who has a close relationship to nurses, causes them the most stress. This is mentioned in many studies (Farhadi et al., 2014; Rhezaii & Fallahi, 2006; Hazavehei, Moghimbeigi & Hamidi, 2012). Milutinovic et al. (2012) reported that the highest stressful situation among nurses is death and dying in their study. Facing death is an inevitable stage for the medical science department, especially the nurses. Death is a significant, frequent and everyday incidence in the nursing profession (Hojjati et al., 2015). Death causes concerns and fears for health care providers which can affect the quality of care (Gama, Vieira & Barbosa, 2012).

As the nature of nursing calls for establishing close contact with patients and their families, watching the patients in their deathbed is always stressful to nurses (Gheshlagh et al., 2017). The cause of death is one of the major causes of stress, showing the fact that nurses is not given the necessary education about the process

of death (Farhadi). Providing an interactive environment where nurses can personalize their own feelings of death can be a potentially effective way (Cevik & Kav, 2013).

In this study, workload was introduced as one of the stressors. In the study by Martaghi Ghasemi et al. (2011), after suffering and death, the patient introduced workload as a stressor in line with our study. Wang et al. (2011) introduced workload as the most important stressor among nurses, inconsistent with our study.

The results showed that other stressors among nurses are uncertainty about treatment and conflict with nurses. This is consistent with the findings of Moheemad et al. (2011) reporting the stressors in their study of death, uncertainty about treatment, conflict with colleagues and workload. Alnem et al. (2005) considered the main stressor as uncertainty about treatment. However, in our study, this uncertainty about treatment was in the next priorities after death and workload.

Conclusion

As the nature of nursing profession is stressful, one should increase the nurses and managers' awareness of the effects of stressful situations. Due to the critical responsibility of nurses to care for and restore the health and well-being of patients, it is essential that all officials pay more attention to the reduction of occupational stresses in this group.

Table 1: Frequency distribution of demographic characteristics of nurses working in educational centers of Urmia

Variable		Frequency	Percent
Age	≤25	26	11.3
	30-26	95	41.1
	35-31	50	21.6
	40-36	33	14.3
	40≤	27	17.7
Gender	Female	207	86.2
	Male	33	13.8
Marital status	Single	98	40.8
	Married	141	58.8
	Widow-divorced	1	0.4
Education level	MA	1	0.4
	BA	236	98.3
	Associate	3	1.3
Employment status	Official	72	30
	Project	36	15
	Agreement	7	32.1
	Contract	55	22.9
	Firm	--	--
Work shift	Morning	30	12.6
	Evening	1	0.4
	the night	9	4
	Morning- evening	--	--
	Flexi hour	200	83
Work experience	6 months to one year	2,5	10.9
	1-5	122	53
	6-10	23	10
	11-15	43	18.7

	16≤	17	7.4
Workplace	Emergency	40	16.7
	ICU	61	25.4
	Burn	12	5
	Operation	41	17.1
	Internal	44	18.3
	Orthopedics	31	12.9
	Operation room	11	4.6

Table 2: Frequency distribution of nurses working in educational centers of Urmia University of Medical Sciences based on occupational stress levels

Stress of occupational cases	Frequency	Percent
Low (≤68)	7	2.9
Medium (103-69)	110	46
High (104 ≤)	122	51
Total	239	100
Mean: 102.68	Minimum: 41	
Standard deviation: 15.52	Maximum: 131	

Table 3: Distribution of frequency, mean and standard deviation of the responses of the subjects to each of the occupational stressful situations in the educational centers of Urmia University of Medical Sciences

Response Question	Stressful situation	Never stressful		Rarely stressful		Sometimes stressful		Always stressful		Total	Mean	SD
		Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent			
A	Suffering and death of the patient										3.28	0.85
1	Performing painful care approaches to the patient	13	5.5	41	17.3	111	46.8	72	30.4	237	3.02	0.84
2	Feeling unable to deal with a patient with serious illness	29	12.2	48	20.2	80	33.8	80	33.8	237	2.89	1.01
3	Talking or hearing the words of the patient whose death is close	18	7.6	34	14.3	67	28.3	118	49.8	237	3.2	0.95
4	Patient death	13	5.6	27	11.4	64	27.1	132	55.9	236	3.34	0.89
5	The death of the patient with whom you have established close relations	7	3.1	12	5.2	50	21.6	162	70.1	231	3.59	0.73
6	Non-presence of the doctor at the time of death	10	¼	22	9.4	48	20.4	155	65.9	235	3.48	0.83
7	See patient suffering	5	½	16	6.7	81	33.9	137	57.3	239	3.46	0.71
B	Conflict with doctors										3.04	0.88
8	Being criticized by a doctor	10	4.2	45	19.1	90	38.1	91	38.6	236	3.11	0.86
9	Conflict with doctors	14	6	32	13.8	74	31.9	112	48.3	232	3.22	0.90
10	Fear of mistakes while caring for the patient	23	9.7	52	21.8	71	29.8	92	38.7	238	2.98	1.00
11	Disagreement with the doctor in case of treatment or care for the patient	13	5.6	69	26.9	109	46.8	42	18	233	2.77	0.79
12	Deciding on the patient while the doctor is not available	10	4.2	44	18.4	98	41	87	36.4	239	3.10	0.84

C	Inadequate preparation											2.73	0.86
13	Feeling incompetent in meeting the emotional needs of the patient's family	26	11.2	69	29.9	91	39.4	45	19.5	231	2.67	0.92	
14	Facing a patient's question in a situation where there is no satisfactory answer	10	4.2	70	29.3	109	45.6	50	20.9	239	2.83	0.80	
15	Feeling incompetent in meeting the emotional needs of the patient	22	9.5	70	30.2	100	43.1	40	17.2	232	2.68	0.87	
D	Lack of support											2.52	0.95
16	Not having a position to speak comfortably about the problems with other partner nurses	28	11.8	61	25.7	95	40.1	53	22.4	237	2.73	0.94	
17	The lack of a position to share your experiences and feelings with other personnel	43	18.1	81	34	83	34/9	31	13	238	2.43	0.93	
18	Lack of position to express their negative emotions to some patients and their fellows with other staff	47	20.3	78	33.8	72	31.2	34	14.7	231	2.40	0.97	
E	Conflict with other nurses											3/07	0/93
19	Conflict with head nurse or supervisor	12	5.1	33	14.1	64	27.2	126	53.6	235	3.29	0.90	
20	Working as an alternative nurse in other wards due to lack of personnel	18	7.6	20	8.4	48	20.1	152	63.9	238	3.40	0.93	
21	Problems in working with a nurse or nurses in other wards	29	12.3	42	17.9	105	44.7	59	25.1	235	2.83	0.95	
22	Criticized by head nurse or supervisor	18	7.6	36	15.3	87	36.8	95	40.3	236	3.10	0.92	
23	Problems in working with a specific nurse or ward nurse	29	12.3	62	26.3	93	39.4	52	22	236	2.71	0.95	
F	Workload											3.14	0.82
24	The automatic devices (monitor, suction, stethoscope, ophthalmoscope, computer, and so on) malfunctioning	11	4.6	39	16.4	80	33.6	108	45.4	238	3.20	0.66	
25	The lack of chance to share the experiences and feelings with other personnel	43	1.18	81	34	83	9.34	31	13	238	43.2	93.0	
26	Doing too much non-nursing work, such as office work	26	2.11	42	9.17	88	6.37	78	3.33	234	93.2	98.0	
27	Not having enough time to provide emotional support to the patient	18	8.7	54	4.23	104	45	55	8.23	231	85.2	87.0	
28	Not having enough time to do all nursing activities	5	1.2	45	19	102	43	85	9.35	237	13.3	79.0	
29	Lack of personnel for adequate coverage of the ward	7	3	17	2.7	73	8.30	140	59	237	46.3	76.0	
G	Uncertainty about treatment											11.3	81.0
30	Failure to receive sufficient information from the doctor about the patient's treatment status	13	4.5	47	7.19	106	4.44	73	5.30	239	3	85.0	
The rest of table 15 is on the next page													
31	Doctor's medical instructions that seem to be wrong	6	2.6	43	18.4	96	41	89	38	234	3.15	0.81	
32	The absence of doctors in emergency cases	7	2.9	18	7.5	70	29.2	145	60.4	240	3.47	0.76	
33	Lack of awareness of what should be stated about the condition and treatment of the patient to his family	9	3.8	65	27.8	110	47	50	21.4	234	2.86	0.79	
34	Uncertainty about the proper functioning of a specialized tool	7	3	52	22	93	39.4	84	35.6	236	3.08	0.83	

References

1. Abarghouei MR, Sorbi MH, Abarghouei M, Bidaki R, Yazdanpoor S. A study of job stress and burnout and related factors in the hospital personnel of Iran. *Electronic physician*. 2016;8(7):2625.

2. Abarghouei MR, Sorbi MH, Abarghouei M, Bidaki R, Yazdanpoor S. A study of job stress and burnout and related factors in the hospital personnel of Iran. *Electronic physician*. 2016;8(7):2625.
3. Al Hosis KF, Mersal FA, Keshk LI. Effects of job stress on health of Saudi nurses working in ministry of health hospitals in qassim region in KSA. *Life Science Journal*. 2013;10(1):1036-44.
4. ALnems A, Aboads F, Al-Yousef M, AL-Yateem A, Abotabar N. Nurses' perceived job related stress and job satisfaction in Amman private hospitals. Retrieved December. 2005;1:2009.
5. Azad-Marzabadi E, Fesharaki MG. Job Stress and Related Factors Among Iranian Male Staff Using a Path Analysis Model. *Iranian Red Crescent Medical Journal*. 2016;18(6).
6. Bahrami A, Akbari H, Mousavi SGA, Hannani M, Ramezani Y. Job stress among the nursing staff of Kashan hospitals. *KAUMS Journal (FEYZ)*. 2011;15(4):366-73.
7. Bahrami, A., et al. (2011). "Job stress among the nursing staff of Kashan hospitals." *Feyz Journals of Kashan University of Medical Sciences* 15(4).
8. Cavaleiro, A. M., et al. (2008). "Stress in nurses working in intensive care units." *Revista Latino-Americana de Enfermagem* 16(1): 29-35.
9. Cevik B, Kav S. Attitudes and experiences of nurses toward death and caring for dying patients in Turkey. *Cancer nursing*. 2013;36(6):E58-E65.
10. Chatzigianni D, Tsounis A, Markopoulos N, Sarafis P. Occupational stress experienced by nurses working in a Greek Regional Hospital: A cross-sectional study. *Iranian journal of nursing and midwifery research*. 2018;23(6):450.
11. Dagget T, Molla A, Belachew T. Job related stress among nurses working in Jimma Zone public hospitals, South West Ethiopia: a cross sectional study. *BMC nursing*. 2016;15(1):39.
12. Dall'Ora, C., et al. (2015). "Association of 12 h shifts and nurses' job satisfaction, burnout and intention to leave: findings from a cross-sectional study of 12 European countries." *BMJ open* 5(9): e008331.
13. Farhadi M, KHalkhali H, Hemmati Maslakhak M. Job stressors in critical care nurses. *The journal of urmia nursing and midwifery faculty*. 2014;11(11):875-83.
14. French M, Kaplan R. Job stress among nursing performance in dialysis unit. *J Nurs Res* 2003; 3:150-59.
15. Gama G, Vieira M, Barbosa F. Factors influencing nurses' attitudes toward death. *International Journal of Palliative Nursing*. 2012;18(6):267-73.
16. Gheshlagh R, Parizad N, Dalvand S, Zarei M, Farajzadeh M, Karami M, et al. The prevalence of job stress among nurses in Iran: A meta-analysis study. *Nursing and Midwifery Studies*. 2017;6(4):143-8.
17. Ghiyasvandian S, Gebra AA. Coping work strategies and job satisfaction among Iranian nurses. *Iranian Red Crescent Medical Journal*. 2014;16(6).
18. Gray-Toft P, Anderson J. The nursing stress scale: Development of an instrument. *J Psychopathol Behav Assess*. 1981; 3(1): 11-23.
19. Haile, D. (2016). *Assessment of Occupational Stress, Job Satisfaction and Associated Factors among Nurses in East Gojjam Zone Public Hospitals Northwest Ethiopia, 2016*, AAU, 2016.
20. Hashemi M, Garshad A. Assessment job stress in nursing personal in a selected teaching hospitals of North Khorasan University of medical sciences 2008. *J North Khorasan Univ Med Sci* 2012; 1(4): 95-102. (Persian)
21. Hayes B, Douglas C, Bonner A. Work environment, job satisfaction, stress and burnout among haemodialysis nurses. *J Nurs Manag*. 2015; 23(5): 588-98. doi: 10.1111/jonm.12184. PMID: 24372699.
22. Hazavehei MM, Moghimbeigi A, Hamidi Y. Assessing stress level and stress management among Hamadan hospital nurses based on precede model. *The horizon of medical sciences*. 2012;18(2):78-85.
23. Hojjati H, Hekmati PN, Nasrabadi T, Hoseini S. Attitudes of Nurses Towards Death. *Journal of health and care*. 2015;17(2):146-153.
24. Jannati, Y., et al. (2011). "Iranian clinical nurses' coping strategies for job stress." *Journal of occupational health* 53(2): 123-129.
25. Mark, G. and A. Smith (2012). "Occupational stress, job characteristics, coping, and the mental health of nurses." *British journal of health psychology* 17(3): 505-521.

26. McVicar A. Scoping the common antecedents of job stress and job satisfaction for nurses (2000-2013) using the job demands-resources model of stress. *J Nurs Manag.* 2016;24(2):E112-36. DOI: 10.1111/jonm.12326 PMID: 26174010.
27. Milutinović D, Golubović B, Brkić N, Prokeš B. Professional stress and health among critical care nurses in Serbia. *Archives of Industrial Hygiene and Toxicology.* 2012;63(2):171-80.
28. Mohamed F, Gaafar Y, Abd Alkader W. Pediatric nurses' stresses in intensive care units and its related factors. *Journal of American Scienc.* 2011;7(9):304-15.
29. Mortaghi ghasemi M, Ghahramani M, Vahedianazimi A, Ghorbany F. nurse, s job stress in therapeutic-educational centers in Zanjan. *J Zanjan Univ Med Sci.*2011(8):1.
30. Mwinga C, Mugala D. Prevalence and causes of stress among nurses at Ndola Central Hospital—A nurses' perspective. *Int J Novel Res Healthc Nurs.* 2015;2:158-65.
31. Nam S-J, Chun HJ, Moon JS, Park SC, Hwang Y-J, Yoo IK, et al. Job stress and job satisfaction among health-care workers of endoscopy units in Korea. *Clinical endoscopy.* 2016;49(3):266.
32. Nam S-J, Chun HJ, Moon JS, Park SC, Hwang Y-J, Yoo IK, et al. Job stress and job satisfaction among health-care workers of endoscopy units in Korea. *Clinical endoscopy.* 2016;49(3):266.
33. Nasiry ZGD, Talebpour AF, Hosseini VSMR, Rajabzadeh R. Quality of Life and Its Relationship with Job Stress among Nursing Staff in Hospitals of Sari. 2016.
34. Negussie N, Kaur G. The effect of job demand-control-social support model on nurses' job satisfaction in specialized teaching hospitals, Ethiopia. *Ethiopian journal of health sciences.* 2016;26(4):311-20.
35. Rhezaii S, Fallahi AHM. Evaluating Impact Of Communication Skills Training On Level Of Job Stress Among Nursing Personnel Working At Rehabilitation Centers In Cities&58; Ray-Tehran-Shemiranat. *Tehran University Medical Journal.* 2006;64(1):21-6.
36. Rosnawati, M. R., et al. (2010). "The Bahasa Melayu version of the Nursing Stress Scale among nurses: a reliability study in Malaysia." *Asia Pacific Journal of Public Health* 22(4): 501-506.
37. Sahraian, A., et al. (2013). "Occupational stress among hospital nurses: Comparison of internal, surgical, and psychiatric wards." *International Journal of Community Based Nursing and Midwifery* 1(4): 182-190.
38. Salilih, S. Z. and A. A. Abajobir (2014). "Work-related stress and associated factors among nurses working in public hospitals of Addis Ababa, Ethiopia: A Cross-Sectional Study." *Workplace health & safety* 62(8): 326-332.
39. Tajvar A, Saraji GN, Ghanbarnejad A, Omidi L, Hosseini SSS, Abadi ASS. Occupational stress and mental health among nurses in a medical intensive care unit of a general hospital in Bandar Abbas in 2013. *Electronic physician.* 2015;7(3):1108.
40. Van Bogaert, P., et al. (2017). "Predictors of burnout, work engagement and nurse reported job outcomes and quality of care: a mixed method study." *BMC nursing* 16(1): 5.
41. Wang W, Kong AWM, Chair SY. Relationship between job stress level and coping strategies used by Hong Kong nurses working in an acute surgical unit. *Applied nursing research.* 2011;24(4):238-43.
42. Yahya S, Zainiyah S, IM A, Chow C. Stress and its associated factors amongst ward nurses in a public hospital Kuala Lumpur. *Malaysian journal of public health medicine.* 2011;11(1):78-85.
43. Zeghami SH, Asgharzadeh C. Relationship between job stress and burnout in nursing personal. *J Hamedan Faculty Nurs Midwifery* 2011; 19(2):42-9. (Persian)