

# Modeling of Effective Factors of Job Stress on Nurses' Self-efficacy in a Developing Country

Mehdi Kahouei, Faezeh Daihimfar

## ABSTRACT

**BACKGROUND:** Health care workers experience stress in proportion to their job involvement, among them the nurses are the largest service providers in the health system.

**OBJECTIVE:** This study was performed to determine effective factors of job stress on nurses' self-efficacy.

**METHODS:** Participants in this study were nursing staffs of affiliated health care organizations of Semnan University of Medical Sciences Iran.

**RESULTS:** The findings showed that 14% of the participants had not self-efficacy. Role ambiguity (OR=1.140, CI 95%) and Role boundary (OR=1.231, CI 95%) had negative and significant relationships with the participants' self-efficacy ( $P < 0.001$ ).

**CONCLUSIONS:** The findings suggest that the job stress influences on nurses' ability to control and deal with the problems. The results of this study can be used in interference planning so as to promote and protect the health of nurses against stress factors.

**KEY WORDS:** Effective Factors, Job Stress, Self-Efficacy, Nurse.

*This article may be cited as:* Kahouei M, Daihimfar F. Modeling of Effective Factors of Job Stress on Nurses' Self-efficacy in a Developing Country. *J Liaquat Uni Med Health Sci.* 2016;15(04):203-7. doi: 10.22442/jlumhs.161540493

## INTRODUCTION

When the individual is expected to perform more than what his or her capabilities and competencies allow the result would be occupational stress<sup>1,2</sup>. Occupational stress affect individuals health, reduce the individual quality of life and they are highly prone to develop injuries and harms stemming from the overly extraneous workloads<sup>3</sup>. Among the most important areas in health sustainable development procedure in the human communities is the hygiene and treatment sector which has been allegedly found to be in a direct relationship to the human health and it is in charge of the highly crucial duty of maintaining and restoring health to the human society<sup>4</sup>. Nurses and the hospital personnel are exposed to a greater deal of occupational stress as a result of their job sensitivities b and the relationships they are required to establish with the patients<sup>5</sup>. Furthermore, in all of the jobs in which the human relationships are proposed as being a critical part there is to be found a higher job-related stress<sup>6</sup>. Nursing occupation stress mostly occurs as a result of workload and work pressure and it has been discovered to be leading to qualitative and quantitative downfalls<sup>7</sup>.

The nurses are faced with abundant and particular stresses which is their occupation-specific and since the nurses' psychological health is directly tied to their performance quality in taking care of the patients, reducing the stresses existing ubiquitously in this occu-

pation through the environmental and psychological interventions plays an essential role in the enhancement of their psychological health and subsequently their vocational performance augmentation<sup>8</sup>. Aoki et al in a study which conducted on 194 nurses, concluded that 26.2% of the individuals studied suffer from intensive and severe occupational stress<sup>9</sup>. On the other hand, self-efficacy is the individual's capability for organization and implementation of the required courses in order for the individual to be enabled to manage his or her conditions. In other words, self-efficacy is the one's belief in his or her capability to succeed in a special situation<sup>10,11</sup>. Self-efficacy beliefs, as a personality variable, play a considerable role in the individual's method of handling the life problems<sup>12</sup> and amongst the factors related to the job every individual is performing is the belief in one's own weak and strong points<sup>13</sup>.

A high level of self-efficacy brings about the condition for adopting an appropriate approach and a lower level of self-efficacy results in avoidance<sup>14</sup>. The results of the study performed by Niu in Taiwan indicated that the staff members are in need of a high level of self-efficacy in their jobs to learn, be responsible and be committed<sup>15</sup>. Henderson et al in a study found out that self-efficacy is the job satisfaction moderating factor and it can also be a factor behind elevating organizational commitment, of course a lot more similar to the way it reduces the staff tendency to leave<sup>18</sup>. Vermeeren et al in another study learned

that in the organizations where the staff members are satisfied with their jobs they are found to perform their duties a lot better and the customers accordingly feel more satisfied with the services provided<sup>19</sup>. Therefore it is evident that occupational stress and self-efficacy had been addressed among different workers, yet there is scarcity of literature identifying occupational stress and self-efficacy among nurses. The current study undertaken to identify effective factors within the frame work of a model paradigm.

**METHODS**

424 nursing staff of affiliated health care institutions of Semnan University of Medical Sciences participated in this study. After obtaining ethics approval (IR.SEMUMS.REC.1394.196), a covering letter that explained the aims of the research and described that a response to the survey would show their consent to take part in the study, was prepared and distributed with the questionnaire. The participants were assured of the confidentiality of their answers. Two survey documents were used; Osipow’s job stress questionnaire consisted of 60 items and six sections such as role overload, role insufficiency, role ambiguity, role boundary, responsibility and physical environmental, and Scherer’s self-efficacy questionnaire consisted of 17 questions. The study subjects’ attitudes on each item were measured on a Likert scale 1 to 5 (very low to very high). The survey was distributed and the participants were asked to complete it. Then the questionnaire was returned to the researcher during 3 days. Data was analysed for Descriptive statistics and logistic regression using SPSS® 21.

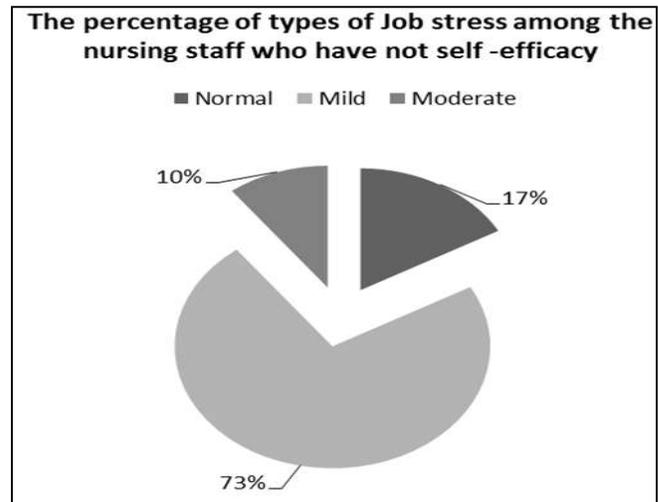
**RESULTS**

Most of participants (78.1%) were female, majority of them (94.6%) had bachelor degree, age average was 32.6 years and mean of their work experiences was 8.82 years. The findings showed that 14% of the participants had not self-efficacy and 86% of them had it.

Among those who do not have self efficacy, 73% had mild job stress and there was a significant difference among job stress levels of the nursing staffs (P<0.001). (Figure I)

The findings showed that role ambiguity (OR=1.140, P<0.001, CI 95%), role boundary (OR=1.231, P<0.001, CI 95%) and responsibility (0.880, P=0.002, CI95%) had negative and significant relationships with the participants’ self-efficacy. (Table I)

**FIGURE I: THE PARTICIPANTS' JOB STRESS AND SELF-EFFICACY**



**DISCUSSION**

The findings showed that increasing role ambiguity is somewhat of relevance in reducing self-efficacy among nurses (OR = 1.140). Yoosefian et al<sup>18</sup> reported average score of 36.58 for role ambiguity among nurses of operating room. Also less than half of the nurses of study of Raj<sup>19</sup> reported that they suffered from role ambiguity. These findings indicate when nurses are uncertain about their tasks, the resultant difficulty makes them unable to do their tasks appropriately. In other words, unawareness of the

**TABLE I: LOGISTIC REGRESSION BETWEEN JOB STRESS COMPONENTS WITH THE NURSING STAFFS’ SELF-EFFICACY**

Job Stress Components	B	SE	Odd's Ratio	df	P-Value	95% CI	
						Lower	Upper
Role overload	-0.058	0.034	0.943	1	0.083	0.883	1.008
Role insufficiency	-0.021	0.040	0.979	1	0.596	0.906	1.058
Role ambiguity	-0.131	0.035	1.140	1	<0.001	1.064	1.222
Role boundary	-0.208	0.056	1.231	1	<0.001	1.104	1.373
Responsibility	-0.127	0.041	0.880	1	0.002	0.812	0.954
Physical environment	-0.034	0.018	0.966	1	0.062	0.932	1.002

normal criteria of their work environment, makes them vulnerable to fail in selecting relatively difficult aims against simple ones. Hence they are not able to see the tasks as difficulties over which they must master; so they will not feel tranquility, achieve self-confidence and they cannot attempt further. This situation leads them to fail to use the appropriate methods of learning, to have not a better reminding power and their performance for doing the tasks for which they are responsible does not improve<sup>20</sup>.

The results of this study showed that the feeling of the role boundary is very important in the reduction of nurses' self-efficacy (OR = 1.231). The findings of Abdi and Shahbazi's study are consistent with the results of this study. They reported that more than half of CCU nurses are of job stress in terms of the role boundary<sup>21</sup>. The results indicate that if nurses feel there is a contradiction between their work ethics and the expectations whose role creates, and if they have doubts about their limits of powers, these lead them to be not able to successfully do anything and lost their motivation<sup>20</sup>. This situation causes this group of clinical staff to be not able to judge properly about their ability to perform tasks within the framework of the given job and profession<sup>22</sup>.

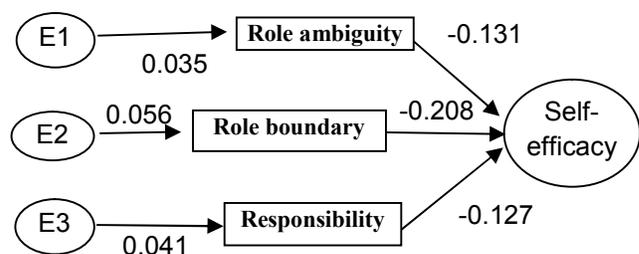
The findings of this study showed that the sense of responsibility can be effective partly in reducing nurses' self-efficacy (OR = 0.880). The results of Lee and Wong's study indicated that one of job stressors among nurses was accountability<sup>23</sup>. The results of the study of Raj indicated that about half of CCU nurses have suffered from job stress in respect of the responsibility of the role<sup>19</sup>. The findings suggest that if the clinical staff like nurses feel pressure in front of colleagues who are trouble, or in other words if they feel responsibility regarding the efficacy of others in the clinical environment, these make nurses to be not more active to solve their problems, and consider themselves weak and easily feel the disappointment and inefficiency.

The findings showed that the increase in role overload is partly of relevance in reducing self-efficacy (OR = 0.943). Time deficiency or work force for psychological support and completing the patients' affairs lead nurses to feel stress<sup>24,25</sup>. Lee's study showed that the overload and the role responsibility are very stressful<sup>23</sup>. Findings of this study indicate that the increase of the overload for nurses cause they reach this belief that they are not able to cope and solve the existing problems in their work environment<sup>26,27</sup>.

Findings of this study showed that the feeling of role insufficiency among the nurses is partly of relevance in reducing their self-efficacy (OR = 0.979). Yoosefian et al found that the staff of operating room was partly of the role insufficiency<sup>18</sup>. Bahrami A et al also real-

ized that more than half of the nurses were of stress in terms of role inefficiency<sup>28</sup>. It was reported also that more than half of the nurses participating in the study of Abdi and Shahbazi, about 54.1%, suffered from stress in this regard<sup>22</sup>. The results suggest that if there is no correspondence between the needs of the work environment and nurses' level of skill and education, they will feel that they cannot have great control on the events that affect their lives and they are not able to provide a good future for themselves. This situation increases their concerns. The following shows the effective factors of job stress on the nursing staffs' self-efficacy.

**FIGURE II: MODELING OF EFFECTIVE FACTORS**



The results of this study showed that nurses' job stress has an important effect on their personal efficiency reduction, emotional and cognitive flows and this affects negatively their clinical performance reduction. It seems that in order to promote nurses' health and satisfaction level and protecting them against stressful factors, achieving knowledge on the risk factors and factors protecting individual and their mechanism is of importance.

### ACKNOWLEDGMENTS

This study was performed by financial support of Semnan University of Medical Sciences. We would like to thank the Clinical Research Development Unit of Kowsar and Amiralmomenin Educational, Research and Therapeutic Centers of Semnan University of Medical Sciences for providing facilities to this work.

### REFERENCES

1. Sonnentag S, Fritz C. Recovery from job stress: The stressor-detachment model as an integrative framework. *J. Organiz. Behav*, 2015;36:S72-S103.
2. Farzaneh K, Zahra A, Farhad AZ, Zeinab P, Panoë SR, Safollah A, et al. The Survey of Job Injuries and Mental Health Disorders among Clinical Nurses from Ergonomics Aspect. *Res J Med Sci*, 2011; 5(5):289-93.
3. Hayes B, Douglas C, Bonner A. Work environment, job satisfaction, stress and burnout among

- haemodialysis nurses. *J Nurs Manage*, 2015;23(5):588-98.
4. Blumenthal D, Hsiao W. Lessons from the East - China's rapidly evolving health care system. *New Engl J Med*, 2015;372(14):1281-5.
  5. Bianchi R, Schonfeld IS. Job stress, inflammation, and atherosclerosis: A reflection. *Am J Ind Med*, 2016;59(4):340-1.
  6. 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. *CHJ* 2010;5(1 and 2):45-52.
  7. Donyavi V, Wild K, Solayman Maygoon S, Akbari M. Scale field study of job stress in nurses of a military hospital in Tehran. *J Nurs Physicians. NCC No. nineteenth and twentieth* 2012:13-9.
  8. 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 Nurs*, 2016;15(1):39.
  9. Aoki M, Keiikarnka B, Chompikul J. Job stress among nurses in public hospitals in Ratchaburi province, Thailand. *J Pub Health Dev*, 2011; 9(1): 19-27.
  10. Zhao FF, Lei XL, He W, Gu YH, Li DW. The study of perceived stress, coping strategy and self-efficacy of Chinese undergraduate nursing students in clinical practice. *Int J Nurs Pract*, 2015;21(4):401-9.
  11. Mozghan K, Sadat GSPS, Malekeh M, Mehdi K. The Survey of Residents and Radiologists' Attitudes about Access to Patient Information in Teleradiology in Iran. *J Eng Appl Sci* 2012;7(2):155-58.
  12. Ellis J, Brown K, Ramsay SA, Falk JM. Social Cognitive Theory-Based Cooking Program for Student-Athletes' Healthy Food Choices and Food Preparation Self-Efficacy. *J Nutr Educ Behav*, 2016;48(7):S26.
  13. Ahern T, Gardner A, Courtney M. Exploring patient support by breast care nurses and geographical residence as moderators of the unmet needs and self-efficacy of Australian women with breast cancer: Results from a cross-sectional, nationwide survey. *Eur J Oncol Nurs*, 2016;23:72-80.
  14. Burns SM. Predicting academic progression for student registered nurse anesthetists. *AANA J*. 2011;79(3):193-201.
  15. Niu, Han-Jen. Investigating the effects of self-efficacy on foodservice industry employees' career commitment. *Int J Hosp Manage*, 2010;29(4):743-50.
  16. Henderson A, Rowe J, Watson K, Hitchen-Holmes D. Graduating nurses' self-efficacy in palliative care practice: An exploratory study. *Nurse Educ Today*, 2016;39:141-6.
  17. Vermeeren B, Kuipers B, Steijn B. Two Faces of the Satisfaction Mirror: A Study of Work Environment, Job Satisfaction and Customer Satisfaction in Dutch Municipalities. *Review of Public Personnel Administration*. Columbia, 2011;31(2):171-89.
  18. Yoosefian N, et al. The survey of job stress components of operation room staffs of teaching hospitals of Zahedan. *Health Care Manage*, 2015;21(6): 960-66.
  19. Raj AK. Job stress among staff nurses working in critical care units and their Socio-demographic correlates: A cross sectional survey. *GJRA* 2016;4(12):340-5.
  20. Zhang W, Li K, Zhang X, Chen L. Coping self-efficacy of Chinese nursing undergraduates with their research projects. *Nurse Educ Today*, 2016;45:126-31.
  21. Abdi H, Shahbazi L. The relationship between occupational stress and burn out in critical nurses. *J Yazd Shahid Sadoghi Univ Med Sci Health Serv* 2002;9:58-65.
  22. Munroe B, Buckley T, Curtis K, Murphy M, Strachan L, Hardy J, et al. The impact of HIRAID on emergency nurses' self-efficacy, anxiety and perceived control: A simulated study. *Intl Emerg Nurs*, 2016;25:53-8.
  23. Lee I, Wong HH. Perceived occupational stress and related factors in public health nurses. *J Nurs Res*, 2002; 10(4): 253-60.
  24. Dickinson T, Wright KM. Stress and born out in forensic mental nursing; a literature review. *Br J Nurs*, 2008; 17(2):82-7.
  25. Mehdi K, Majdabadi HA, Mozghan K, Sadat GS, Saedeh AA, Farzaneh K, et al. Nurses' perception about the effect of hospital information system in Iran. *Int Inf Institute* 2012;15(4):1823.
  26. Burgess L, Irvine F, Wallymahmed A. Personality, stress and coping in intensive care nurses: a descriptive exploratory study. *Nurs Crit Care*. 2010;15(3):129-40.
  27. Brackett MA, Palomera R, Mojsa-Kaja J, Reyes

MR, Salovey P. Emotion-regulation ability, burnout, and job satisfaction among British secondary-school teachers. *Psychol Schs*, 2010; 47 (4):406-17.

28. Bahrami A, Akbari H, Mousavi S, Hannani M, Ramezani Y. Job stress among the nursing staff of Kashan hospitals. *J Kashan University Med Sci*, 2012;15(4): 366-373.



*AUTHOR AFFILIATION:*

**Mehdi Kahouei** (*Corresponding Author*)

Social Determinant of Health Research Center  
Nursing and Allied Health Faculty  
Semnan University of Medical Sciences, Semnan, Iran.  
Email: mkahouei@yahoo.com

**Faezeh Daihimfar**

Student Research Committee  
Nursing and Allied Health Faculty  
Semnan University of Medical Sciences, Semnan, Iran.