

THE STUDY OF CORRELATION BETWEEN JOB STRESS AND TURNOVER INTENTIONS AMONG THE OPERATING ROOM NURSES IN SELECTED HOSPITALS OF TEHRAN UNIVERSITY OF MEDICAL SCIENCE

ELHAM AHANIAN¹, ABASAT MIRZAEI^{1*}, ASIEH SALAHSHOORIAN FARD¹

¹Tehran Medical Sciences Branch, Islamic Azad University, Tehran, Iran

ABSTRACT

Background and subjunctives: Nurses experience a wide range of stress during their working life and due to their job which makes them be highly skilled, do team work in different situations, provide 24-hour care and also be emotional. Nurses working in the operating room, because of the nature of their work, suffer more stress than the others working in different sectors in the hospital which as a result can lead to a desire to leave the nursing profession. This study has been done to identify the correlation between job stress and turnover intentions among the operating room nurses in selected hospitals of Tehran University of Medical Science.

Method: This is a kind of descriptive-solidarity study, which was done on 230 workers of nursing staff working in the operating room in selected hospitals of Tehran University of Medical Science. Demographic and Occupational Questionnaire, Osipow Job Stress Questionnaire and Henshaw Scale Turnover Forecast have been used to gather data. The analysis of the data from this study was done by using the SPSS software, version 21, using Descriptive Statistics, Statistical Test and also Gamma Correlation Coefficient and Correlation Coefficient Significant Test was used to investigate the variables.

Findings: In the survey conducted, generally in 94.6% of nurses job stress was assessed average. In 42.9% of nurses turnover intentions were moderate, and also there was a significant relation between job stress and turnover intentions ($p=0.002$).

Conclusion: In their jobs, nurses encounter stressful factors, which affect their general health that can lead to an increase in turnover intentions. So Health authorities should consider specific measures in order to reduce and defuse the existing tension and also create a better and more appropriate condition for nurses and stop them from turnover intentions.

Key words: job stress, turnover intentions, operating room nursing staff.

Received February 05, 2016; Accepted March 02, 2016

Introduction

One of the factors affecting the performance of the staff in organizations is stress that puts their health at risk⁽¹⁾. Job stress has a major impact on various aspects of working people's life⁽²⁾. So facing stress caused by the working environment due to the influence of environmental factors operating on identity, social relationships and material life of individuals, is inevitable⁽³⁾. The nursing profession is comprised of a series of activities and interpersonal relationships that are often stressful⁽⁴⁾.

In this regard, type of job as a driver, is an important factor in health care system which impos-

es psychological pressure on them and in most cases leads to a negative impact on the quality of clinical care⁽⁵⁾. People attending the operating room as medical staff are continuously dealing with stress⁽⁶⁾. In the meantime, anesthesia nurses and also operating room nurses that are part of nursing society, expose various difficulty and stress due to the sensitive and stressful job they have⁽⁴⁾.

Any situation at work that causes certain type of stress response and increases the level of stimulation in every individual person, is called job stress⁽⁷⁾. According to the International Labor Organization expenses incurred by countries due to job stress was estimated between 1-3.5% of GDP

(Gross Domestic Product)⁽⁸⁾. Torshizi writes Salehi's quotes: Only in America nearly 11 million people suffer from job stress. In another survey nearly a quarter of American people considered job stress the biggest and most difficult problem in life⁽⁹⁾. Job stress can threaten the workers' physical and mental health and disrupt the individual's social functioning which can be a threat for the performance and organizational productivity⁽¹⁰⁾. Desire to leave job is the perception of an individual about turnover, although one currently remains in his job. The desire to leave is anticipated to be equal to job turnover which means one is likely to quit job⁽¹¹⁾. Unlike real turnover, desire to leave job, isn't obvious⁽¹²⁾. The desire to turnover is an anticipation to a real turnover and leaving their profession is the main factor for the shortage of nurses⁽¹³⁾.

A variety of factors affect the turnover of nurses among which can be pointed to organizational factors, management style, career promotion opportunities, economy, pay system, perceived role, individual factors, number of nurses and patients in the hospital and its different departments, workload and job burnout⁽¹⁴⁾. Because of the extent of the shortage of nursing staff, the results require further attention to this issue⁽¹⁵⁾. Based on research 7.4% of nurses are being absent due to aging or disability to work which is 80% more than the other working groups.

In this context, after some study on the relative prevalence of health disorders at stressful jobs, the National and Health Institute of America has announced that among 120 jobs that were under study, nurses visiting the doctors for mental health problems ranked 27⁽¹⁶⁾. According to the America's Association of Nurses Recruitment, the level of displacement among nurses is 32% and the level of job turnover is 40% and every year one nurse for every 10 nurses leave their jobs⁽¹¹⁾. All these factors in a vicious cycle, with an increase in personnel leave process and thus increase the pressure on the environment and increase distress, can make the underlying conditions. Studies have shown that the working environment and conditions play an important role in the process of job turnover⁽¹⁷⁾.

In addition to the shortage of experienced nurses, leave nursing costs 60 to 120 thousand dollars for per nurse⁽¹⁸⁾. According to the financial and human cost of turnover of nurses in health care organizations, anticipating it in order to avoid costly and unnecessary turnovers, seems very important⁽¹⁹⁾. Therefore, since stress can be a major reason for the desire to leave, and turnover can also cause

several damages to the health system, this study was intended to examine the relationship between job stress and turnover intentions of the nursing personnel of operating room in selected hospitals of Tehran University of Medical Science in 1394.

Study method

This research is a descriptive-solidarity study which has been done to examine the relation between job stress and turnover intentions of the nursing personnel of operating room and their relation with demographic and employment variables. In this study, research community consists of 580 nurses working in the operating rooms of the selected hospitals of Tehran University of Medical Science. After receiving permission from the President and Deputy Minister of Islamic Azad University, Tehran Medical Science branch and coordinating with the head of Sina, Imam Khomeini and Shariati Hospitals, questionnaires were distributed in the operating rooms of this hospital. Criteria for taking part in the survey include at least 2 years clinical experience in operating room, not experiencing severe crisis like the loss of close relatives, divorce, bankruptcy and loss of property in the past year (according to their statement), having the associate or bachelor's degree and be working as officials, contract employees, permanent employees in selected hospitals of Tehran University of Medical Science.

According to the statistic community which included 580 members, 230 samples were determined according to Morgan table, therefore 230 questionnaires were distributed among the nursing personnel of selected hospitals of Tehran University of Medical Science and was examined statistically after being collected. In order to achieve the research objectives in this study, two questionnaire and a scale were used. The first part of the questionnaire is demographic and occupational information.

This questionnaire includes some information about gender, age, marital status, education (educational degree), clinical experience, employment type, the type of work shift and benefits. The second part of questionnaire is Osipow's Job Stress. These tools that were used and assessed in several studies including Bahrami and et al. in 1388 and Gholamnezhad and Nick Peyma in 1388 as well, the tools has proven reliability and internal consistency with Cronbach 's alpha 0.89 (16 & 20).

The reliability of the test reliability was retested in a satisfactory level. In 60 questions 5 Likert Scales were included (Never, Sometimes, Often, Usually, Most of the time). There are 5 options for every word, from never (1 score) to most of the time (5 score). Osipow's job role questionnaire is used to evaluate every individuals stress from six dimensions including 1- Workload role, 2- Incompetence role, 3- Dual role, 4- Group's role, 5- Responsibility, 6- Physical atmosphere. Based on the obtained scores, the person is placed in one of four categories: 1- no stress 2- average 3- rather severe 4- severe. The third part is the anticipated scale turnover. This scale was designed and psychometric by Henshaw and Atwood in 1985 and again was reviewed by Liu et al. in 2007 and was scored on a Likert scale of 5 degrees⁽²¹⁾.

Scale scores range from 1 to 5 and the total score for an intended to leave tool is 12 to 60, and as this score is closer to 5, the turnover intension grows higher. 5, average maximum score of (60) is divided by the number of questions in the questionnaire with the scale of⁽¹²⁾. For the scale of turnover anticipated, Hariri verified this scale based on validity and reliability in 1391⁽²²⁾. Content Credibility Index and Instrument Stability were measured with Internal Consistency method ($\alpha=0.80$) and retest ($r=0.81$) and also the validity of this scale was approved by Liu through content validity and stability with Cronbach's alpha of 0.85.

Data analysis was performed using SPSS software. Descriptive Statistics were used to describe the data (table preparation, relative frequency distribution ...), Inferential Statistical Test were used to analyze them, and the Gamma Correlation Coefficient was used for ranking data, and Significance of the Correlation Coefficient Test was used to assess the association between variables.

Findings

From 226 questionnaire which were answered, about 70% were women and 30% were men and around 52% were younger than 30. 57% of them were married and the rest were single. 40% of respondents were anesthesia specialist or technicians and 45% of them had less than five years of working experience. And also the highest rate was for the official employees (43%). 41% of

them worked for morning and evening shifts and 57% of them believed that they are payed less than enough. In Osipow's questionnaire job stress level was composed of 6 dimensions and in this research every individual's stress level is studied in each dimension. 78.6% of respondent in workload role, 56.3% of them in incompetence role, 55.4% in dual role, 51.8% in group role and 55.8% in responsibility role are with average stress and 43.8% in physical atmosphere are without stress.

As table 1 shows, total stress of 60 items of Osipow's questionnaire in 94.6% of respondents is measured average. For a better comparison of occupational stress, frequency of every 6 dimension is shown in table 1.

Stress Rate	Frequency	Frequency Percent	Compulsive Frequency Percent
no stress	6	2.7	2.7
average	212	94.6	97.3
rather severe	6	2.7	100
severe	0	0	
total	224	100	

Table 1: Respondents' Stress Rate Frequency.

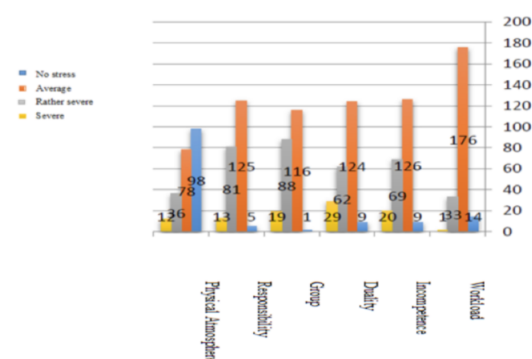


Diagram 1: The frequency of various aspects of stress rate in one glance.

Turnover Intension	Frequency	Frequency Percent	Compulsive Frequency Percent
Very Low	26	11.5	11.5
Low	71	31.4	42.9
Average	97	42.9	85.8
Much	29	12.8	98.7
Too Much	3	1.3	100
Total	226	100	

Table 2: The frequency of respondent's intention to leave.

As we can see in table 1, the number of respondents who have the least stress at work is more than the other dimensions. People in terms of their workload have the least stress in the sense that the amount of work assigned to them is in the specified level and fits with the individual's ability and one isn't forced to do works overtime than specified. If we sum up the Severe Stress rate with Rather Sever Stress in every dimension and then compare them, we realize that people in group role have the most stress rate.

According to table number 2, 42.9% of respondents moderately tend to leave and there is a significant relation between job stress and turnover intentions ($p < 0.05$). As the stress rate grows the turnover intension also grows in people.

Discussion

In this study the level of stress was evaluated at the average level. The study by Habibi et al. shows that 73.8% and 53.8% of operating room nursing staff of Shahid Rajaei and Social Security hospital had average occupational stress which aligns with the present research. In addition factors affecting stress and depression were professional satisfaction, income and employment type. Pearson correlation showed that there is a positive correlation between occupational stress and depression⁽⁴⁾. Also Lin et al. in their study, regardless of working shifts, reported moderate job stress, poor sleep quality and moderate self-perceived health for nurses, that the results for occupational stress is in line with the present study⁽²³⁾. In Hosseini et al. studies, among nurses participating, 83.9% had severe stress and 10.7 had average stress. As well as a significant relation between stress and insomnia with educational degree there was also a significant relation between interest in job with age and work experience. The results in Zeiqami Mohammadi and Asqarzade Haqiqi's study showed that 86.7% of nurses had average stress which is in line with our study⁽¹⁰⁾. In present research turnover intention in majority of sectors was measured average. The results of the study by Zhang revealed that 45% of nurses were dissatisfied with their current jobs and the reason for this dissatisfaction was their payment and 5% of the nurses were intend to leave⁽¹³⁾, also the study done by A. Rolle revealed that nearly two-third of 58.8% of midwives in one year (beside the new professional training) tend to leave, satisfaction was reported among the mid-

wives and a few of them were satisfied with reward and some of them with job security⁽²⁵⁾.

The result of study done by Hariri et al. showed that occupational turnover is average (3.35 out of 5) among nurses which is in line with the present research, moreover, there is a significant relation between position and occupational turnover and also shift and occupational turnover⁽²²⁾, furthermore Abbaszade et al. stated in their study that there isn't a significant relation between moral distress and tend to stay in nursing profession⁽²⁶⁾.

In this study there was a significant relation between job stress and turnover intention ($p = 0.002$). The study by Kavanagh illustrates that there is a significant relation between working in operating room with fatigue and working in ICU with stress, and also work in medical and surgical departments associate with stress and depression⁽²⁷⁾. In addition, the results of the study by Abvalrab et al. showed that the relation between stress and satisfaction with job performance was significantly negative but the relation between job stress and tend to work was positive. Nurses who suffer less job stress, showed more intention to work than the others which is in line with the present research⁽²⁸⁾.

Conclusion

As the result of this research showed, nurses deal with stressful factors in their job that can put their general health in danger and lead to turnover intentions. After checking Osipow's 5 job stress dimensions statistical analysis showed that: Workload role, Incompetence role, Dual role, Group's role, Responsibility and Physical atmosphere, in nurses job stress was evaluated moderate but most of the nurses working in operating room don't tolerate any stress in terms of physical atmosphere. Generally job stress in operating room nurses is evaluated moderate and turnover intension (3 out of 5) was evaluated moderate as well. According to statistical date there is a positive and significant relation between job stress and turnover intension, and as the job stress grows in one turnover intensions grows as well. Since the Health and Care Department is one of the most important areas of sustainable development of health in human societies, so service and support improvement will lead to having healthy nurses and as a result a healthy society.

Stress in the nursing profession is followed by

a drop in the quality and quantity of health service, so identifying the level of stress in nurses will carry out activities in order to eliminate or modify the factors that cause stress and offer strategies to control it, and the result will be improving the service quality and decreasing the level of turnover intentions. Using the results of research one can understand the importance of mental health of nurses in order to make them stay in their profession. Therefore, health authorities must consider crucial actions or specific measures to reduce or resolve the existing tensions and make a better and more suitable conditions, especially in management or organizational issues.

Following subjects are suggested for further studies: a comparative study of the relationship between job stress and turnover intentions in operating room and ICU nursing staff. Comparing the stress in operating room nursing staff and nursing staff of emergency- comparing the desire to leave among operating room nursing staff and nursing staff of emergency- studying relationship between job stress with the support of supervisors in the operating room nursing staff.

References

- Burgess, L., Irvin, F., Wallymahmed, A., (2010) *Personality stress and coping in intensive care nurses: a descriptive exploratory study*. Nurs Crit care; 15(3): 40-129.
- Nikbakht Naser Abadi Alireza, Salari Amir, Hosseinpour Mohammad, Yekani Nezhad Mir Saeid (1393). *Study of burnout and turnover intentions and its relation with Emergency room nursing personnel*. Journal of Nursing Research, volume 9, Number 3, P19-29.
- Mojoyinola, JK., (2008) *Effect of job stress on health, personal and work behavior of nurses in public in ospit metropolis, Nigeria*. Ethno Med; 2(2): 143-148.
- Habibi Rahim, Zahedifar Farhad, Hadizade Mohammad, Ghobadi Mohammad, Mohammadi Mehran, (1393). *Study the relation between job stress and depression in nurses of Shahid Rajaei and Social Security, Qazvin*. Edrak, Journal of Student Research Committee, University og Qazvin, the ninth year, number 35, P45-50.
- Khaghanizade Morteza, Ebadi Abbas, Sirati Nayer Masoud, Rahmani Manzar (1389). *Study of the relation between job stress and quality of work life of nurses in the Hospital of Armed Forces*. Journal of Military Medicine, Volume 10, Number 3, P 175-184.
- Yousefian Miandoab Nazanin, Gargich Anamolhagh, pirnezhad Habibollah, Rezvani Amin Mahdi, Shahrakipour Mahnaz, Barahoei Alireza (1393). *Checking the components of job stress in teaching hospital operating room Zahedan*, Journal of Sabzevar University of Medical Sciences, Volume 21, Number 6, P 960-967.
- Stanks , J., (2013) *Stress at work*, Routledge, 88-95.
- Tangri, RP. *What stress costs. Aspecial report presented by shrysalis performance strategies*. [cited 5Aug 2009] Availabie at :<http://www.stress costs.com>.
- Torshizi Leila, Ahmadi FAzlolah (1390). *Checking occupational stress from the perspective of clinical nurses*, Journal of Nursing Care Research Center, Tehran University of Medical Sciences, Volume 24, Number 70, P 49-60.
- Zeighami Mohammadi Sharare, Asgharzade Haghighi Solmaz (1390). *The relation between job stress and burnout in nursing personnel, Faculty of Nursing and Midwifery, Hamedan*. Volume 19. Number 36, P 42-49.
- Hosseinpour Mohammad (1392). *Comparing burnout and turnover intentions in the pre-hospital and hospital emergency operational staff*. Shiraz 1392. Masters thesis in the field of nursing education. Tehran University of Medical Sciences and Health Services. P 6 & 8.
- Perez, M., (2011) *Tumover intent*. Diploma Thesis, University of Zurich. pp 1-73.
- Zhang, L., et al., (2014) *The Association of Chinese Hospital Work Enviroment with Nurse Burnout, Job Satisfaction, and Intention to Leave*. Nurs Outlook. 62(2); 128-137.
- Barzide Mostafa, Chobine Alireza, Tabatabaei Hamidreza (1391). *Dimensions of job stress and its relationship with nurses' general health*. Journal of Medicine Business Volume 4, Number 3, P 17-27.
- Hudspeth, R.,(2013) *Staffing healthy workplaces: Some global nursing shortage issues*. Nursing Administration Quarterly, 4; 374-376.
- Bahrami Abas, Akbari Hossein, Mosavi Gholamhossein, Hnani Mitra, Ramezani Yadollah (1388). *Job stress among matrons at the hospitals in Kashan*. Journal Of Azad University of Kashan. Volume 15, Number 4, P 366-373.
- Cummings, Cl., (2012) *The effect of moral distresson nursing retention in the acute care setting*. UNF Theses and Dissertations.Paper371. <http://www.stti.iupui.edu/pp07/congress10/cummings-c.pdf>.
- Storffjell, J L., et al.,(2008) *The balancing act: Patient care time versus cost*. Journal of ursing, Administration; 38(5) 244-249.
- Barlow, K M., Zangaro, G A., (2010) *Meta-analysis of the reliability and validity of the Anticipated Turnover Scale across studiesof registered nurses in the United States*. Journal of Nursing Management; 18(7) 862-873.
- Gholamnezhad Hanie, Nikpeyma Nasrin (1388). *Causes of job stress among nurses*, Iran Occupational Health Journal, Volume 6, Number 1, P 22-27.
- Liou, S R., (2007) *The relationships between collectivist orientation, perception of practice environment, organizational commitment, and Intention to leave current job among Asian nurses working in the U.S.A*. (PhD thesis). University of Texas at Austin.
- Lin, S.H., Liao, W.C., Chen, M.Y., Fan, J.Y., (2012) *The impact of shift work on nurses job stress, sleep quality and self-perceived health status*. Journal of Nursing Management; 22: 1-9.
- Rouleau, D., Fournier, P., Philibert A., Mbengue, B., Dumont, A., (2012) *The effects of midwives job satis-*

- faction on burnout, intention to quit and turnover:a longitudinal study in senegal*. Human Resources for Health, 10: 9, 11-30.
- 24) Abaszade Abas, NAKhaei Nozar, Borhani Fariba, Roshanzade Mostafa, 1392, *the impact of moral distress on nurses turnover intention in educational hospitals in Birjand*. Iranian Journal of Medical Ethics and History, Volume 6, number 2, P 57-66.
- 25) Kawano Y., (2008) *Association of job-related stress factors with psychological and somatic symptoms among Japanese hospital nurses:effect of departmental environment in acute care hospital*. j Occup Health; 50(1): 79-85.
- 26) Abualrub, R.F., AL-Zaru, I.M., (2008) *Job stress, recognition, job performance and intention to stay at work among Jordanian hospital nurses*. Journal of Nursing Management; 16, 227-236 .

ACKNOWLEDGMENTS

This article is taken from a master's thesis in Nursing Education. Hereby, I sincerely appreciate the Research Deputy of Islamic Azad University of Tehran Medical Sciences as well as great teachers, supervisors and nurses who somehow participated in this project.

Corresponding author
amacademic@yahoo.com