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

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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.

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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 imposes 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[^7].

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[^8]. 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)\(^4\). 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\(^4\). 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\(^4\). 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\(^4\). Unlike real turnover, desire to leave job, isn’t obvious\(^4\). The desire to turnover is an anticipation to a real turnover and leaving their profession is the main factor for the shortage of nurses\(^4\).

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\(^4\). Because of the extent of the shortage of nursing staff, the results require further attention to this issue\(^4\). 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\(^4\). 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\(^1\). 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\(^4\).

In addition to the shortage of experienced nurses, leave nursing costs 60 to 120 thousand dollars for per nurse\(^4\). 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\(^4\). 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 relationship 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 individual's 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

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 intention 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. Content Credibility Index and Instrument Stability were measured with Internal Consistency method (α=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.

<table>
<thead>
<tr>
<th>Stress Rate</th>
<th>Frequency</th>
<th>Frequency Percent</th>
<th>Compulsive Frequency Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>no stress</td>
<td>6</td>
<td>2.7</td>
<td>2.7</td>
</tr>
<tr>
<td>average</td>
<td>212</td>
<td>94.6</td>
<td>97.3</td>
</tr>
<tr>
<td>rather severe</td>
<td>6</td>
<td>2.7</td>
<td>100</td>
</tr>
<tr>
<td>severe</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>total</td>
<td>224</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Respondents’ Stress Rate Frequency.

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

<table>
<thead>
<tr>
<th>Turnover Intention</th>
<th>Frequency</th>
<th>Frequency Percent</th>
<th>Compulsive Frequency Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Low</td>
<td>26</td>
<td>11.5</td>
<td>11.5</td>
</tr>
<tr>
<td>Low</td>
<td>71</td>
<td>31.4</td>
<td>42.9</td>
</tr>
<tr>
<td>Average</td>
<td>97</td>
<td>42.9</td>
<td>85.8</td>
</tr>
<tr>
<td>Much</td>
<td>29</td>
<td>12.8</td>
<td>98.7</td>
</tr>
<tr>
<td>Too Much</td>
<td>3</td>
<td>1.3</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>226</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

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 intention 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 Rajaeei 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(10). 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(13). 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 midwives 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 intention (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 intention, 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
The study of correlation between job stress and turnover intentions among the operating room nurses...

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