



DIMENSIONS OF OCCUPATIONAL STRESS IN NURSES WORKING IN TEACHING HOSPITALS OF TABRIZ, 2016

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ABSTRACT

Introduction: Nursing profession is continuously exposed to stress due to its work conditions and occupational situations. Professional stress is of negative effects on individuals and the organization. The current study was conducted in order to investigate dimensions of occupational stress in nurses working in teaching hospitals of Tabriz.

Method: The present research was a type of descriptive study. The people who took part in the study were 400 nurses working in different departments of eight Teaching Hospitals of Tabriz who were selected by relative random sampling. The data collection tool was HSE Occupational Stress Questionnaire. Data were analyzed through descriptive statistics using SPSS 13 software.

Results: In the study of dimensions of occupational stress, the results demonstrated that the major source of stress in the dimension of change is related to "lack of consultation about changes", in the dimension of relationship is related to "inappropriate relationship", in the dimension of peer support is related to "lack of support on the behalf of colleagues", in the dimension of management is related to "lack of reward and encouragement", in the dimension of control is related to the "unchangeability of working hours", in the dimension of the violation is related to "lack of knowledge of policies", and in the dimension of demand is related to "neglecting some of the tasks due to excessive workload".

Conclusion: Based on the findings of the current research, the highest job stress for nurses is in dimensions of change and colleague relationships. Therefore, it is suggested that a suitable strategy is adopted for changes in the work environment and appropriate relationship so that we can witness a safe and proper environment in hospitals that is the first requirement of providing high quality care for patients.

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Introduction

Nursing has been considered as a highly stressful profession [1]. Occupational stress and tension in nursing have caught the attention of many researchers in recent years [2]. For example, the results of a survey in the United States in 2002 showed that more than 60 percent of nurses had job stress [3]. Moreover, the results of a survey in 2011 showed that the acute and chronic effects of occupational stress on health are considered to be among the most important concerns of nurses [4].

Besides the difficulties and costs imposed to nurses, job stress also has huge consequences and costs for the organization [1]. The costs imposed to nurses include physical, mental, and behavioral diseases, and the consequences imposed to the organization consist of absenteeism and decline in productivity [5]. The economy of California, for example, annually incurs several billion dollars loss due to absence caused by stress [6]. According to the estimation conducted by an American company, out of every three people, one person is absent from work due to occupational stress [7].

According to the definition offered by National Institute for Occupational Safety and Health (NIOSH), occupational stress occurs when there is no harmony between the workplace demand and the individual competencies and capabilities. Many studies have shown that nurses face a lot of stressors in the workplace [8, 9].

Sources of occupational stress in nurses:

Occupational stressors are different among nurses, some of which are related to the nurses themselves as individuals and some to the workplace [10]. These tension generating stressors include: increasing workload, lack of facilities, inappropriate referrals, role conflict and ambiguity, lack of monitoring, lack of sufficient financial resources, physical working conditions, job security, lack of support on the behalf of colleagues and supervisors, changes and so on and so forth [11]. Many researchers have identified other sources of job stress with which the nurses are faced, e.g. Currid et al. have referred to heavy workload, violent and aggressive behavior of some users, poor managerial support, and fear of blame as part of stress generating sources for the nurses [12]. Likewise Cai et al. found that workload and death were among the most common causes of stress in nurses [13]. Moreover, Taylor and Barling found that many stressors are involved in nursing profession which ultimately lead to burnout and exhaustion [14].

The Impact of Occupational Stress on Nurses:

Occupational stress can be of a significant impact on the physical and mental health of nurses. Job stress has negative effects on both patients and nurses [9]. For nurses, high levels of stress and tension can lead to psychosomatic illness, decline in service delivery to patients, occupational burnout, increased absenteeism, and job loss and lower quality of life [15]. For patients, nursing stress can lead to demoralization and reduction in the quantity and quality of provided care [16]. Occupational stress leads the nurses to emotional exhaustion, depression, hopelessness, digestive disorders, musculoskeletal disorders, hypertension, drug abuse and smoking [17, 18]. Numerous studies have shown the effect of occupational stress on psychosomatic problems such as heart disease, alcoholism, depression and tendency to suicide [8, 18]. Moreover, according to the conducted researches, suicidal ideation is higher in nurses in mental health department. For example, Pompili et al. found that occupational stress among nurses may lead to suicide and frustration [19]. Studies have shown that nurses in intensive care units tend to commit suicide more than the nurses who are working in general departments [10]. Poole argues that changes in the workplace lead to mental disorders in the staff [20].

Research Necessity:

Although in recent years numerous studies have been conducted on occupational stress in nurses, each of them has addressed specific dimension of occupational stress, or they have been focused on the stress dimensions of nurses in special departments, while others departments were forgotten and less research has been done on the stress of nurses working in all departments of hospitals. To this end and in view of the increasing amount of nurses' workloads, the nurses involvement in the clinical governance and accreditation program, increasing administrative bureaucracy, the lack of knowledge of nurses, the weakness in the performance mode of interdisciplinary teamwork, the lack of conformity between the taught skills and the skills needed in the workplace, and particularly the lack of nursing force and the impact of factors mentioned above in increasing stress in nurses, this study seems necessary. On the other hand, stress intensity and stressors in nurses have been reported differently in different studies, because the stress variable is completely dependent on the environment and individual, and therefore the generalization of the results of other studies does not seem to be correct and reveals the necessity of conducting a study aimed at determining the level of occupational stress, identifying the most important dimension of occupational stress and the most stressful factor in nurses working in teaching hospitals of Tabriz.

Methods

The current study is a descriptive research aimed at assessing the dimensions of occupational stress in nurses working in Tabriz hospitals in 2016.

Measures:

In present study, two questionnaires were used for data collection. A personal questionnaire including information regarding age, sex, marital status, work experience, etc., and the HSE Occupational Stress Questionnaire, developed by the UK Health and Safety Executive in the 1990s, which contains 7 dimensions (demand, control, peer support, relationship, role, change and support of managers) and 35 questions, the answer to each question is scored on a Likert scale of 1 to 5 [21]. High scores reflect low job stress while low scores indicate job stress. It should be noted that validity and reliability of this questionnaire in Iran was carried out by Marzabadi et al. (2010) using Pearson correlation coefficient ($r = 0.65$) [22]. In this study, tool validity was examined by using content validity. For this reason, the questionnaire was distributed among 13 faculty members and scientific validity was thus secured. The reliability of this tool in the present study was determined by internal correlation (Cronbach's alpha coefficient) of $\alpha = 50\%$

Sampling and Data Collections:

The statistical population of this research was consisted of all nurses of the eight public hospitals of Tabriz, which amounted to 1908 people. According to the formula $N = \frac{Nz2pq}{(N-1)E^2 + pq}$, the sample size was estimated to be 418 individuals based on 5% accuracy and 5% acceptable error rate which was reduced to 400 after the adjustment. The sampling was done randomly. The sample size of every department was determined in view of the number of staff working in the respective department and in the next stage with the random numbers table of each department. The criteria for entering the study include having a nursing degree and higher, willingness to participate in research, clinical experience of more than one year, and having no affiliation to other treatment centers. The criteria for exiting the study were history of mental disorders, history of admission to psychiatric hospitals, history of drug abuse, psychological status.

Ethical:

In line with the codes of research ethics after obtaining permission from the vice chancellor for research of Tabriz University of Medical Sciences, and submitting it to the management of the hospital, questionnaires were distributed among the samples that had criteria necessary for entering the research. To do this research, the nurses were informed that their participation in the research is completely optional in this study and the information of the individuals remains as secret by the researcher. After receiving conscientious consent in written and verbal forms, the questionnaires were delivered to the staff and at the end of the work shift, the questionnaires were returned.

Statistical Analysis:

Data were analyzed by SPSS 13 based on the descriptive statistics and standard deviation.

Findings**Demographic and Work-Related Characteristics**

The total sample consisted of 400 participants. Of them, 329 (82.2%) were females. Age of the nurses ranged between 24 and 56 years (Mean = 35.92, SD = 6.92). Maximum work experience among participants was 26-30 years and minimum was 1-5 years. The majority of nurses (188 nurses) worked more than 44 hours per week.

Number of patients in the wards (caseload) ranged between 6 and 10 patients. Other demographic and Work-Related Characteristics can be seen in Table 1.

Table 1. Demographic and Work-Related Characteristics (N=400)

Variable	N	%
Marital Status		
Single	144	36
Married	256	64
Educational Level		
Associated bachelor	2	0.5
Master	340	85
Phd	55	13.5
	3	0.8
Shift Worked		
Morning Shift		
Evening/Rotated Shift	107	26.8
Night Shift	154	38.4
	139	34.8
Organizational position		
Head nurse		
Nurse	14	3.5
Other	383	95.8
	3	0.3
Addition shifta		
Yes(1)	298	74.5
No(0)	102	25.5

JOB Stress

The results of this study showed that the highest frequency was related to the stress caused by this factor: "due to the heavy workload, I must overlook some of my duties" and "my work hours can be varied," and the least frequency belongs to "I must work hard and tolerate ugly words and undesirable actions of others". (Table 2)

In examining the dimensions of occupational stress, the highest average score for demand was 25.79 ± 4.38 and the lowest mean score for the change was 9.13 ± 2.12 (Table 3).

Table 2. The Most and Least Frequently Reported Stressors among Nurses (N = 400)

job Stressors	Mean	SD
The Five Most Common Job Stressors		
12. Overlooking duties due to heavy workload	2.41	
30. Unchangeability of work hours		
35. Lack of support on the behalf of managers in workplace		
31. Lack of willingness on the behalf of colleagues for solving work problems		
26. Lack of sufficient opportunity for discussing the possibility of changing of work hours		
The Five Least Common job Stressors		
1. Lack of knowledge of expectations	4.38	0.853
5. Undesirable behaviors in workplace		1.123
27. Lack of appropriate relations between the colleagues		0.934
15. Lack of authority in the field of responsibility		1.052
9. Demanding work		1.023

Table 3. Means and Standard Deviations (SD) for job Stress among Nurses (N=400)

Job Stress(Variable)	Range	Score intermiate	Mean	SD
Job stress(total)				
Demand	35-175	105	114.12	11.69
Control	8-40	24	25.79	4.38
Peer support	6-30	18	18.12	3.68
Change	4-20	12	13.24	2.53
Role	3-15	9	9.13	2.12
Managers' support	5-25	15	20.03	3.01
Relationship	5-25	15	15.10	3.92
	4-20	12	12.71	2.93

Discussion

The key objective of this research is providing an assessment of the dimensions of occupational stress in nurses working in teaching hospitals of Tabriz. The highest mean scores were related to the dimension of demand, which indicates low stress and the lowest mean scores, respectively, were related to the dimensions of change and relationship, which indicates high occupational stress in these dimensions. In the present study, dimension of change was considered as the first dimension involved in stress generation in nurses which is consistent with the findings of Cleg [23], Nasiri [24] and Mohammadi [25] while it is not consistent with the studies conducted by Saharnian [26], Abdi and Shahbazi [27], in which the most important stress factor is sought for in role dimension. Perhaps the difference between the results of the study conducted by Saharnian with our study was related to the study environment because in Saharnian's study, surgical, internal and psychiatric departments were studied while in our study all general and special departments except the psychiatric department were

researched. Given the working environment of the psychiatric departments is different due to the care offered to the mental patients, existing threats and heavy responsibilities, the highest frequency in the dimension of change were related to the following stress generating factor, i.e. "lack of consultation with staff about changes" and "lack of access to managers for asking questions". This issue shows that the speed of changes within organizations has been one of the most important causes of nurses' stress in few past decades.

Since the changes inherently concern people at all levels of the organization, and, on the other hand, changes in the work environment require learning new skills in the workplace, then managers are expected to consult about planned changes with the staff and hear their views. Therefore, when the staff can not adapt themselves to the new conditions, they experience tension and psychological stress. Many studies have shown that work-related changes in the workplace have caused mental and emotional problems in staff. According to the study conducted by Cleg, continuous organizational change is the source of many stresses in nurses [23].

The second dimension of occupational stress among nurses is concerned with relationship. Work conditions can have an effective impact on the relationships and behavior of the medical staff in providing care for patients. The inappropriate relations of the staff with the patient cause the patient's needs and problems to remain unnoticed, and the diagnosis and treatment of the patient to be delayed. The findings of this study are in line with the findings of Nasiri [24] et al., Guppy [28] et al. while they are not consistent with the results of Esfandiyar et al., Osmar et al. [29]. Perhaps the difference between the results of these studies and the present study is related to the conditions of the work environment and the statistical population. According to the study conducted by Milutinovic, special care nurses are more susceptible to stress due to exposure to patient mortality and working conditions [30].

The highest frequency in the dimension of relationship was concerned with the stress generating factor of "inappropriate relationships between colleagues". Numerous studies have shown that appropriate support and relationship are among the most important buffers against the effects of stress [31, 32]. According to Cohen, supervisors and hospital managers have not been sufficiently empowered so as to establish appropriate relationships with nurses. The results of various researches have shown that appropriate relationship between colleagues and managers can reduce job stress and as a result emotional exhaustion [33].

In our study, the lowest dimension of occupational stress was related to the demand dimension, which is consistent with the study conducted by Azma [29]. While in the study conducted by Hammide et al. [5], Chin et al. [34], Ciau and Currid [12] et al., the most stressful factor was the dimension concerned with demand, which was not in line with the results of our findings. Moreover, in most studies the dimension of demand has also been recognized as a stressor. Perhaps the difference between the results of our study and the study by Hammide is due to the fact that the nurses who participated in the study of Hammide were selected from the psychiatric department, while in our study, mental health was one of the exiting criteria. The psychiatric department, due to its heavy workload, threats posed by patients, higher administrative workload and increasing work hours, creates stress in nurses. In our study, the most important factor involved in increasing demand was "neglecting some of the tasks due to heavy workload." The increase in the number of patients and the shortage of nursing staff increase the workload and the number of nurses' work shifts. Thus, nurses can not handle their own affairs. According to studies, nursing shortages have led to nurses neglecting three quarters of their duties. Therefore, by creating a suitable work environment and increasing the number of staff in different work shifts, we will be witness to low stress in nurses.

Conclusion

Our research findings showed that nurses working in teaching hospitals of Tabriz had a moderate level of stress. There is no doubt that occupational stress has a negative effect on mental and physical health of nurses. Teaching stress management strategies to the nurses for reducing the negative effects of stress on nurses and patients should be promoted in organizations. Since the presence of moderate stress in nurses working in teaching hospitals in Tabriz can affect the effectiveness of nurses dealing with clients, then teaching seems necessary to help nurses to cope with the well-known nursing stressors that are due to the challenging nature of nursing and to identify factors and signs of occupational stress and adaptive strategies such as music therapy, biofeedback and relaxation.

Limitation:

In spite of their limitations, these findings make helpful and valuable contribution to research works of Tabriz nurses in this field. The results of this study, despite the existence of a sufficient sample size, due to the fact that it is a cross-sectional and descriptive study, can not be generalized as to other cities. The tool used in this study was designed by researchers from Western countries. Despite the reliability and validity of this tool, it could be inappropriate for nurses in Tabriz. Another limitation is the inaccuracy of responses given to the questionnaire due to the high number of questions. Another limitation of the study is concerned with the indifferentiation of results in different departments because each department has different stressors.

Suggestions

It is suggested that in forthcoming studies the level of knowledge of nurses of the methods of confrontation with stress and their application to be researched. The current study has been a quantitative research and it is suggested that the coming researches to be done in qualitative manner so that a deeper vision to be provided regarding the issue under the study.

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