

Evaluation of Nursing stress and its effective factors in nurses of Shahidzadeh Hospital in Behbahan in 2019: Challenges in Nursing

Research Article

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Abstract

Background and Aim: Nursing is one of the occupations that face a lot of stress in medical settings, especially hospitals. Job stress can negatively affect a nurse's performance and how she cares for her patient. Therefore, the present study was performed to evaluate the level of job stress in nurses of Shahidzadeh Hospital in Behbahan. **Materials and Methods:** The present study was a descriptive cross-sectional analytical study. The instruments used in the study included demographic information and an expanded nursing stress scale questionnaire. The study was performed on 220 nurses of Shahidzadeh Hospital in Behbahan by census method. Statistical data were performed using SPSS software version 22 using descriptive and inferential statistics at a significant level of $p < 0.05$. **Results:** The mean age of participants was 31.02 ± 06.68 . The mean scores of participants in occupational stress and its subscales showed that about half of the subjects (55.9%) in the study had poor job stress. There was no significant relationship between job stress and demographic variables of gender and marital status using independent t-test and there was no significant relationship between job stress and the above variables. **Conclusion:** Due to the existence of stress as a negative factor in patient care and the gap between discrimination between physicians and nurses as one of the factors aggravating stress, it is recommended that nursing managers take measures to prevent and support nurses.

Key Words: *Nursing, Stress, Challenges, Behbahan.*

Introduction

Today, work as an important factor in the social life of people in society causes the growth of personality, self-esteem and social identity, but it also has consequences on society, especially employees (1). Job stress as a behavioral and structural emotional response is due to individual and organizational stressors in the workplace that typically involve one-third of employees in various occupations (2, 3). Therefore, any job can be stressful (4).

According to the National Institutes of Health, of the 130 jobs surveyed, nurses ranked 27th among physicians in terms of mental health problems (5). Nursing tensions in 2018 have also been raised as a global concern (6). Nurses' suicide rates are higher than

the general population, and their life expectancy is only one year higher than that of miners (7).

Nursing is faced with a state of grief, suffering, grief and wounds and death of human beings, and usually the nurse, while facing these conditions, takes action to improve the client's condition for which no material rights are provided. (8) Risk of disease transmission In the hospital environment of patients, exposure to dying patients, insufficient time, heavy and irregular shifts and high work responsibilities, insufficient salaries and lack of control over the work environment, lack of cooperation and conflict with staff are known as the most important sources of job stress in nurses (9-11) has also reduced job stress and the quality of life of nurses and increases the likelihood of injury (12).

According to the results of some studies, 93% of nurses are constantly exposed to stressors and 30% of them have gastric ulcers due to this (13). They are also absent from the hospital due to stress and fatigue due to work stress, which is 80% more than other professions (14).

Work environment and hospital also play an important role in causing job stress in nurses and in addition it can also disrupt individual life (5, 15), for

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example, operating room burns and psychiatric wards. They can have different effects on people's health (8).

There are different reports on the amount of job stress in nurses. In the study of Ricoza et al., The level of job stress of emergency department nurses was reported to be high, but some studies have expressed the amount of stress in various departments, including oncology, as moderate (16, 17). Job stress ultimately leads to leaving the job, conflict between staff, job dissatisfaction, low self-esteem and job adequacy, depression and work fatigue, and reduced work efficiency and reduced nursing care (18).

Due to the numerous adverse consequences of job stress and the role of stress in reducing motivation and various problems for nurses and the nursing profession and the fact that no study on job stress in Behbahan nurses has been conducted, this study aims to investigate the level of stress. Nursing was performed in Behbahan Shahidzadeh Hospital.

Materials and Methods

This descriptive-analytical cross-sectional study was conducted in 2019 on 220 nurses working in Shahidzadeh Hospital in Behbahan. The statistical population of this study included all nurses working in the wards of Shahidzadeh Hospital. In this study, the census method was used. Data collection tools included: a revised French Nursing Stress Scale and a demographic information checklist that included age, gender, marital status, and job interest (disinterest, low interest, moderate interest, and high interest).

The expanded nursing stress scale questionnaire was a tool designed by French et al. (19) and included fifty-seven items in 9 subscales, including: death and dying, conflict with physicians, inadequate emotional preparation, problems with peer support, problems with supervisors, workload, uncertainty concerning treatments, patients and families, and discrimination. The subject should choose one of the following options based on the frequency of experience of the desired position. The answers are: 1 = I have no stress at all. 2 = Sometimes I have stress. 3 = I am often stressed. 4 = I am very stressed 5 = This situation does not include my duties. Cronbach's alpha method was used to evaluate the internal consistency of the experiment. The results showed that the expanded nursing stress scale coefficient (0.89) and the validity range of the subscales from $\alpha = 0.88$ (problems with supervisors) to 0.65 = was (discrimination).

Factor analysis of the sub-scale of discrimination showed that gender discrimination is more dispersed (variance) than the other case, racial discrimination. Factor analysis of the sub-scale of discrimination showed that gender discrimination is more widespread than the other case of racial discrimination. The validity of the structure was assessed by confirmatory factor analysis. The results showed that among the components of job stress, patient mortality and workload had the highest score of job stress. Also in Iran, based on the results of Sabzi et al., The face and content validity of this questionnaire

was done and its correlation coefficient was calculated as 75% and its reliability is acceptable (20)

After obtaining the necessary permits and permits from the Vice Chancellor for Research of Behbahan Faculty of Medical Sciences and also making relevant arrangements with the officials of Shahidzadeh Hospital, the researcher collected and completed the questionnaires. Inclusion criteria include: having more work experience from the age of six months, the exclusion criteria were chronic mental and physical illness and lack of interest in participating in the study. It should be noted that all subjects entered the study before completing the questionnaires, completed the informed consent form. To analyze the data Through independent t-test, one-way analysis of variance, Pearson correlation coefficient, ANOVA test was performed using SPSS software version 22.

Results

This study was performed on 220 nurses with mean and standard deviation of 31.02 ± 06.68 , working in Shahidzadeh Hospital in Behbahan. The complete demographic characteristics of the individuals are listed in Volume 1. In this study, 124 (56.4%) of the participants were male and 139 (63.2%) were single. In addition, 131 (59.5%) of the subjects were highly interested in the job. Figure 1 shows the mean scores of participants in occupational stress and its subscales showed that about half of the subjects (55.9%) in the study had poor job stress. In Table 2, the relationship between job stress and demographic variables of gender and marital status was measured using independent t-test and no significant relationship was observed between job stress and the above variables. The relationship between job interest and stress was measured using one-way analysis of variance, which showed a lack of significant relationship between the two variables.

Table 1. Demographic characteristics of the participants

Variable	Classification	Number (percent)
Gender	Male	96(43.6)
	Female	124(56.4)
Marital status	Single	139(63.2)
	Married	81(36.8)
Interest in the job	Uninterested	14(6.4)
	Low interest	20(9.1)
	Medium interest	55(25)
	High interest	131(59.5)
Level of Education	Associate Degree	2(0.9)
	Bachelor	216(98.2)
	Masters	2(0.9)

Figure 1. Average job stress score of participants

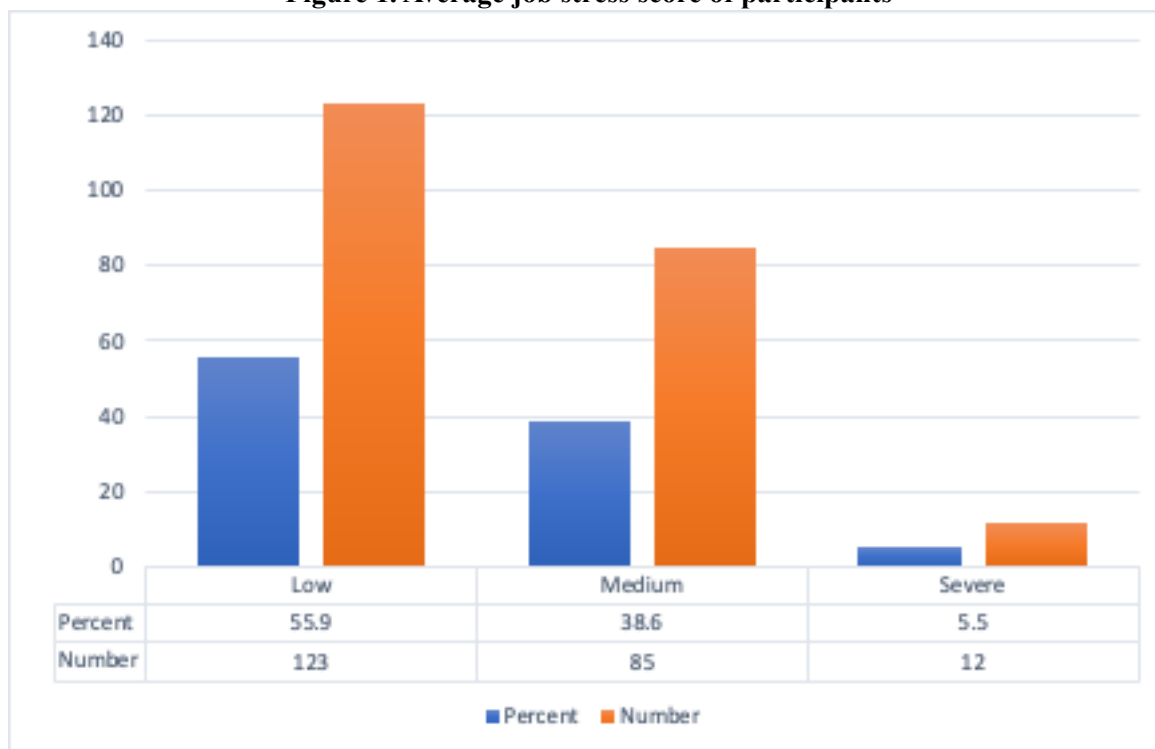


Table 2. Relationship between job stress variable and demographic variables

Variable	Demographic	Classification	Mean ± SD	p-value
Stress	Gender	Male	109.9±48.39	0.57
		Female	106.26±46.49	
	Marital status	Single	111.01±43.25	0.19
		Married	102.43±53.28	
	Interest in the job	Uninterested	110±49.67	0.78
		Low interest	98±47.53	
		Medium interest	110.38±39.83	
		High interest	108.06±50.08	
	Level of Education	Associate Degree	62.5±88.38	0.19
		Bachelor	107.89±46.79	
Masters		149±55.15		
	Age	-	31.02±6.68	0.43

Table 3. Job stress and its sub scales

Subscales	Death and Dying	Conflict with Physicians	Inadequate emotional Preparation	Problems with Peer support	Problems with Supervisors	Work load	Uncertainty concerning treatments	Patients and families	Discrimination	Total Stress
Mean	14.35	9.65	5.06	9.18	14.09	16.53	19.25	16.28	04.99	107.85
Standard deviation	6.36	4.82	2.94	5.22	10.91	08.36	08.22	08.41	04.20	47.25

Table 3 describes the level of job stress subscales in the general population of nurses. According to the results, the highest mean was related to the stress of uncertainty concerning treatments, then the stress of workload, related to patients and their families were in the next ranks, and the lowest was related to discrimination.

Table 4. Mean Scores Job Stress By Gender

Subscales		Death and Dying	Conflict with physicians	Inadequate emotional preparation	Problems with peer Support	Problems with Supervisors	Workload	Uncertainty concerning treatments	Patients and Families	Discrimination
Male	Mean	14.21	09.76	04.85	09.86	13.73	16.97	19.93	16.78	05.53
	Standard deviation	06.48	04.85	02.92	05.64	07.54	08.54	08.43	08.72	04.57
Female	Mean	14.46	09.56	05.22	08.65	14.36	16.19	18.72	15.90	04.57
	Standard deviation	06.29	04.81	02.96	04.83	12.96	08.23	08.05	08.180	03.855

Table 4 describes the mean scores, job stress, nurses, and subtypes of their scales by gender. According to the results, the highest mean in men and women related to stress is uncertainty concerning treatments and the lowest are related to inadequate emotional preparation and discrimination, respectively.

Table 5. Mean job stress scores of participants and subscales by Marriage status

Subscales		Death and Dying	Conflict with physicians	Inadequate emotional Preparation	Problems with peer Support	Problems with Supervisors	Workload	Uncertainty concerning treatments	Patients and Families	Discrimination
Single	Mean	15.22	9.89	5.09	9.64	14.21	17.15	19.51	16.87	4.94
	Standard deviation	5.68	4.39	2.58	4.83	6.97	8.27	7.71	7.88	3.84
Married	Mean	12.87	9.22	5.01	8.38	13.87	15.46	18.81	15.27	5.07
	Standard deviation	7.17	5.49	3.12	5.78	15.56	8.45	9.06	9.21	4.78

Table 5 shows the mean scores, job stress, nurses, and sub-scales, by marital status, separately. According to the results, it was observed that the highest mean in single and married people is related to stress, uncertainty concerning treatments and the lowest is related to discrimination, respectively.

Table 6. Average job stress scores of participants and by education

Subscales		Death and Dying	Conflict with Physicians	Inadequate emotional Preparation	Problems with peer Support	Problems with Supervisors	Workload	Uncertainty concerning treatments	Patients and Families	Discrimination
Associate Degree	Mean	8.50	5.00	2.50	6.00	17.50	7.00	9.00	5.50	02 50.
	Standard deviation	12.02	7.07	3.53	8.480	24.78	9.89	12.72	7.77	3.53
Bachelor	Mean	14.35	9.67	5.08	9.17	14.02	16.54	19.31	16.28	04.97
	Standard deviation	06.28	4.79	2.94	5.22	10.86	08.31	08.13	08.31	04.20
Master	Mean	19.50	12.00	05.00	13.00	17.50	25.50	22.50	27.50	9.00
	Standard deviation	10.60	7.07	4.24	0.00	9.19	0.70	13.43	10.60	04.24

Table 6 describes the mean scores, job stress, nurses, and sub-scales, by level of education. According to the results, the highest average in postgraduate, bachelor and postgraduate students is related to stress problems with supervisors, uncertainty concerning treatments and stress of patients and families, respectively, and the lowest are related to discrimination and inadequate emotional preparation, respectively.

Table 7. Relationship between age and job stress subscales using Pearson correlation coefficient

Age	Job stress subscales	r	P value
	Total Stress	-0.053	0.43
	Death and Dying	-0.114	0.091
	Conflict with Physicians	-0.008	0.91
	Inadequate Emotional Preparation	-0.094	0.16
	Problems with peer Support	-0.065	0.33
	Problems with Supervisors	-0.0049	0.47
	Workload	-0.056	0.41
	Uncertainty Concerning Treatments	-0.047	0.48
	Patients and Families	-0.092	0.17
Discrimination	-0.021	0.76	

In Table 7, the age variable with the job stress subscales is measured using Pearson correlation coefficient. As can be seen, there is no significant relationship between all subscales and the age variable ($p > 0.05$). On the other hand, there is an inverse relationship between age and job stress subscales, so that with increasing age, the scores of subscales have a decreasing trend.

Table 8. Job stress regression with demographic characteristics

Job stress	Model	SS	df	MS	F	R	R ²	P
Regression		11406.699	5	2281.340	1.002	0.153	0.023	0.406
Residual		477700.647	214	2232.246				
Total		489107.345	219					

The data in Table 8 show the calculated regression to examine the relationship between demographic factors and job stress. Regression analysis with gender, age, marital status and job interest has been shown as a predictor and job stress as a criterion. The effect of regression $F = 1.022$, $P \leq 0.406$ is estimated, so it is not significant at the level of 0.05 and R^2 is calculated (0.023), ie in fact the demographic factors (0.023) of job stress Determines.

Table 9. Coefficients of the regression model of demographic characteristics on job stress

Model	B	SE	Beta	T	P
Constant coefficient	-1.707	76.203	-	-0.022	0.982
Gender	-1.931	6.614	-0.020	-0.292	0.771
Age	-0.152	0.525	-0.022	-0.290	0.772
Marriage status	-7.255	7.431	-0.074	-0.976	0.330
Interest in the job	1.733	3.630	0.033	0.477	0.634

Table 9 shows the regression coefficients of the fitted model. The results show that the four predictor variables do not have a significant effect on job stress. Non-standard regression coefficients show that for each unit of increase in the scores of gender, age and marital status, job stress decreases by 0.937, 0.152 and 7.255 units, respectively. Also, with one unit increase in the job interest variable, the amount of job stress increases by 1.733 units. The amount of standard regression coefficients shows that marital status has a greater effect on job stress.

Discussion

Nursing is one of the occupations that face a lot of stress in medical settings, especially hospitals. Job stress can have a negative effect on a nurse's performance and how she cares for the patient. Therefore, the present study was performed to evaluate the level of job stress in nurses of Shahidzadeh Hospital in Behbahan.

In the present study, the mean and standard deviation of nurses' job stress was 107.85 ± 47.25 and 94.5% of the samples had mild to moderate job stress. The results of this study are in line with the results of the quantitative study and the study of Darwish (20, 21). Also, in a 2013 study by the Court of Capoor et al. To investigate burnout, mental health and job stress in Indian hospitals, nurses' job stress was 67.52%, which is consistent with the present study. The results of the studies of Masoumi et al. And the teacher and colleagues were not in line (22-24).

In a study conducted in 2017 by Isfahani et al. On 200 nurses in the emergency department of Isfahan, the prevalence of job stress in nurses was 57% (25). A study in Australia found that 32.4% of nurses had depression, 41.2% had anxiety and 41.2% had work-related stress experiences (26). Also, in the study of Qana Gheshlagh and colleagues' meta-analysis, the prevalence rate of occupational stress in Iranian nurses was calculated to be 96.56% (129% -64%) (27). Such as spirituality, job security, clinical competence and job satisfaction.

To justify this, it should be noted that having an interest in work along with sufficient skills to perform professional responsibilities can lead to the creation of conditions under control. Another point about low job stress is having a relative job security of nurses in Iran, because with increasing population and increasing chronic diseases, more attention to improving the quality and quantity of employment care services and employing nurses in good conditions and Nursing is one of the ten most popular academic disciplines. Nursing can be defined as a job that, given living conditions, is

possible in almost any city. Also, despite the mandatory passing of a "service commitment plan" for nurses, there is a small gap between graduation and recruitment at university-affiliated centers. In recent years, by changing and adjusting working conditions, including increasing salaries and benefits, reducing working hours and giving different hourly coefficients to morning, evening and night shifts, leading to improved working conditions and reduced workload of nurses. It has been shown to reduce job stress.

In addition, it can be said that considering that the research community is Muslim, according to the results of some studies, it can be said that paying attention to values such as serving the same type and giving the highest values in religion to employment (Tabatabai: I am ready to worship for seventy years). A night of nursing to change patients) and helping human health (Qur'an: Anyone who saves a human being from death as if he saved all human beings from death) and placing it at the top of religious affairs has made him look at his profession. It is not just material, and it gives a person a high sense of worth in the effective performance of the job and makes it easier to bear the problems.

Worship in Islam is known to be an effective tool for coping with life's stresses. Also, spiritual and religious behaviors such as prayer can reduce stress and anxiety and increase life expectancy and quality of life and the ability to cope with stress (28, 29). Also, in a study aimed at the effect of reducing the effect of prayer and age on job stress and well-being on 300 Malaya nurses, it was found that praying by nurses is effective in reducing job stress and increasing their well-being (30).

The results of the present study showed that job stress on the scales of conflict with doctors, problems with colleagues, workload and discrimination are higher in men than women. Having a distance from international standards such as nurse-to-bed ratio and nurse-patient ratio increases nurses' workload and thus causes their dissatisfaction and ultimately reduces the quality of service delivery, which has been confirmed in a teacher study. (24). The lower ratio of male labor in patients and the fact that men have a major role to play in providing income for families has led men to work overtime and work in more than one center, which can increase the workload for men.

Although people with a postgraduate degree and a postgraduate degree in this study accounted for a small percentage of the samples, it is noteworthy that the average nursing stress on all scales increased with increasing level of education. This means that the lowest score of stress was related to the postgraduate degree and the highest was related to the master's

degree. It is not possible for a person to meet this level of expectations and responsibilities and to be a source of stress for the individual. And it raises the question of whether the level of education required to work in the clinical environment will increase with the increase of the level of education. Passing the plan and working in the medical environment has entered the next stage, and this will increase their stress after graduation and starting work in the hospital. Explaining this issue in the study of Abdoli review, which was done with the aim of conceptualizing clinical work from the perspective of nursing students, it was found that most nursing students consider clinical work as one of the effective factors in accepting the role of nurse and understanding its nature (31). Also, in some studies, there is a clear gap between nursing education and clinical practice, so that the existing clinical education does not consider empowering students to qualify and clinical skills.

In this study, the mean stress in women was higher than in men, and no significant relationship was found between job stress and demographic variables. In some studies, occupational stress was more common in women (32, 33). In the study of vegetables and colleagues, regression analysis between job stress and demographic factors showed a significant relationship between job stress and gender, so that job stress was higher in men, but there was no significant relationship between job stress and other demographic variables (34). According to the results of some studies, conflict between physician and nurse has been described as one of the most important problems in nurses 'work environment and several factors cause this conflict (35, 36). In justifying this, there is a difference in the amount received and nurses' salaries. In contrast to the volume of work and their salaries, he pointed to the volume of work and the benefits received by doctors.

Also, overtime and other labor costs for nurses are paid after a few months and much later than doctors. In the present study, the average conflict with the physician at the master's level was greater than at the undergraduate level. In explaining this issue, it can be stated that although senior nurses study for almost the same number of years as medical students, they have much less benefits and salaries than doctors, and this provides the ground for discrimination in increasing job stress.

And that they are in charge of the department, the supervisor or the metronome, etc., and it is necessary to ask the doctors about their performance, and this can be one of the sources of conflict. One of the causes of conflicts between doctors and nurses is that nurses have to bear the consequences of doctors' failure to meet the expectations of clients due to long encounters with clients, and the mediating role of nurses between patients and doctors places a great responsibility and psychological burden on nurses.

In the present study, most nurses were very satisfied with their job. The average job satisfaction in other studies also shows the relative satisfaction of nurses with their job (37, 38). In this study, the population under study was nurses of Shahidzadeh Hospital in Behbahan city and its generalization to other

populations is limited. In addition to job stress, it is suggested that stress factors be identified in the Iranian Cultural community and that strategies be taken to combat stress in order to reduce the pressure on the nursing population.

Acknowledgments

This article is the result of a research project approved by the Research Council of Behbahan Faculty of Medical Sciences with the code of ethics IR.BHN.REC.1399.002. The researchers would like to thank the Vice Chancellor for Research, the officials of Behbahan Faculty of Medical Sciences, as well as the nurses participating in this study for their patience and trust in the researchers and all the dear ones who helped us to carry out this research.

Conflict of interest

There is no conflict of interest for the authors in this study.

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