



Original Article

Relationship between resilience and occupational stress among the faculty members of Ahvaz Jundishapur University of Medical Sciences



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ARTICLE INFO

Article History:

Received 6 April 2018

Revised 13 May 2018

Accepted 2 July 2018

Published online 1 August 2018

Keywords:

Faculty members;

Resilience;

Occupational stress;

Jundishapur

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ABSTRACT

Introduction: Stress is seen in all occupations, especially in occupations associated with human health. Resilience is one of the coping strategies that helps a person to face stressful situations and to save on pathogens. The aim of this study, carried out in 2017, was to investigate the correlation between occupational stress and resilience in faculty members of Ahvaz Jundishapur University of Medical Sciences.

Methods: This is a cross sectional study in which 65 faculty members of Ahvaz Jundishapur University of Medical Sciences were recruited through stratified sampling. The data gathering tool was a questionnaire of job stress and resiliency. Data were analyzed by SPSS version 16 and using Pearson correlation test.

Results: In this study, of 65 faculty members, 40 individuals (61.5%) were male and 15 individuals (38.5%) were female. The mean age and working experience of the faculty members were 42.05 ± 10.37 and 13.77 ± 10.10 , respectively, and the mean of resilience and occupational stress were 64.80 ± 14.27 and 109.43 ± 19.88 . Using Pearson correlation coefficient, there was a significant and reverse correlation between resilience and occupational stress ($P = 0.016$, $r = -0.297$).

Conclusion: It seems that increasing the resilience in the faculty members causes a reduction in occupational stress in this group. Therefore, it is suggested that training workshops for stress management and resilience for faculty members of university to be held.

Introduction

Stress and psychological pressure are an integral part of human life (1, 2). Occupation is one of the main sources of stress (3), and occupational stress and its negative impacts on people's attitudes and behaviors can lead to decrease in general and mental health of individuals (4, 5). Roht et al. showed that some of the occupations have more potential to be exposed to stress, or, in other words, they tend to be more prone to neuropsychological stress than other businesses and professions. In the educational environments and universities, there are certain

stresses due to specific circumstances (6). Teaching is one of the stressful occupations, and faculty members of universities experience specific job stresses, due to their working conditions. However, the type and severity of their occupational stress have not been greatly addressed (7). Also, Chin Aveh et al. showed that the negative impact of occupational stress strongly affects teachers (5). The results of the study carried out by Jackson et al. showed that among faculty members of universities, job stress is high due to high workload and occupational characteristics. Thus, these individuals have higher

physical and mental occupational stress and less organizational commitment (8). In recent years, attention has been paid to the sources of stress and its coping strategies in different groups, and it has been shown that the use of coping strategies has led to the reduction of stress. One of the coping strategies that helps a person to face stressful situations and save on pathogens is resilience (9). Resilience is one of the most important human abilities that results in effective adaptation to risk factors. In fact, the concept of resilience applies to those who are at risk but are not psychologically disturbed (10). Resilience allows the individual to benefit from his adaptive skill, transform stressful situations into an opportunity for learning and growing, and consequently control stress. It can be said that resilience improves the problem-solving skills in the person (11). Resilient people also have the capability of internal control, empathy, positive self-reflection, organization, daily responsibility, and positive thinking. These abilities help individuals to have more conformity and compatibility in difficult situation, rather than be more vulnerable (12). Resilient people are able to use personal and social resources to reduce the negative effects of stress. However, resilience is a general factor and not found in specific individuals with unique characteristics (13). Although stress is present in all occupations, it is more important in health-related professions, such as faculty members at the University of Medical Sciences (14). Regarding the lack of attention to the stress and coping with it in faculty members, and little research has been done in this field, the present study aimed to determine the relationship between occupational stress and resilience in the faculty members of Ahvaz Jundishapur University of Medical Sciences.

Methods

The present study, carried out in 2017, was a cross sectional study that investigates the relationship between occupational stress and resilience in faculty members of Ahvaz Jundishapur University of Medical Sciences. The research population was all faculty members at Ahvaz Jundishapur University of Medical Sciences. The stratified sampling method was used and different colleges were considered as strata. A proportional random sample (relative to the number of faculty members) was selected from each faculty. The sample size was calculated as 65 individuals, regarding $\alpha = 0.05$, $\beta = 0.2$, $1-\beta = 0.8$ and $r = -0.38$ (based on previous studies) and also with considering a probability drop of 25%. The criteria for entering the study included: having at least

master's degree, an activity as an educational faculty, and not having physical and mental illness based on individual reports. Data gathering tools: Two occupational stress and resiliency questionnaires were used as the tool. The resilience measurement tool was Connor-Davidson resilience scale (2003) (CD-RIS), which was developed by Connor & Davidson (2003; quoted by Mohammadi, 2005) by reviewing the research sources published in 1979-1991 in the resilience field, and has been adapted for the use in Iran by Mohammadi (2005) (15). Cronbach's alpha reliability coefficient was determined as 0.87 and 0.83 in the study of Jokar et al. (16) and Amini et al. (17). The Connor and Davidson's resilience questionnaire has 25 questions, scored based on five-point Likert scale for each question: 0 = completely false, 1 = rarely true, 2 = sometimes true, 3 = mostly true, and 4 = always true, and people whose score is more than 60, they are considered to be resilient people. Based on this scale, the minimum score for the resilience is zero and the maximum score is 100, and the closer the score is to 100, the more resiliency is displayed. The occupational stress questionnaire of the Health and Safety Executive was created in late 1990. This 35-question questionnaire is set up by Likert scale, and the person is scored from 35 to 175 by choosing options from completely agree to completely disagree. The reliability of this questionnaire was determined in the study carried out by Shakirinia et al. using Cronbach's alpha coefficient (19). The permission was obtaining from the deputy of research at Ahwaz Jundishapur University of Medical Sciences, and then the researcher referred to all faculties at this university. After introducing and providing the necessary knowledge and explanation about the research, the questionnaire of occupational stress and resilience was provided to the faculty members, and then the data were collected. Data analysis was done by SPSS software ver. 16 and using descriptive statistic tests (mean, standard deviation and frequency). Kolmogorov-Smirnov test was used to normalize data, Pearson correlation coefficient was used to examine the relationship between variables, and independent t-test for comparing the means.

Results

In the present study, of 65 faculty members, 40 individuals (61.5%) were male and 25 individuals (38.5%) were female. The mean age and academic work of the faculty members were (42.05 ± 10.37) and (14.6 ± 10.17) , respectively.

Table 1. Frequency distribution of demographic information and their relationship with occupational stress and resilience in the faculty members of Ahvaz Jundishapur University of Medical Sciences

Individual characteristics		Frequency(%)	Mean (±SD) of occupational stress	Mean (±SD) of resiliency	Occupational stress	Resiliency
Gender	woman	25 (38.5)	104.68 (18.62)	62.64 (14.57)	*P= 0.129	*P= 0.339
	man	40 (61.5)	112.4 (20.28)	66.15 (14.1)	T= -1.53	T= 0.964
Education	M. Sc.	12 (18.5)	111.33 (18.38)	63.91 (13.21)	*P= 0.717	*P= 0.998
	Ph. D	53 (81.5)	109 (20.34)	63.82 (14.82)	T= -0.365	T= -0.002
Marital status	Single	9 (13.8)	103.44 (22.31)	68.33 (16.76)	*P= 0.334	*P= 0.428
	Married	56 (86.2)	110.39 (19.51)	64.23 (13.92)	T= 0.973	T= -0.798
Faculty	Rehabilitation	10 (15.4)	115.7 (9.93)	66.7 (14.23)	**P= 0.199	**P=0.186
	Pharmacology	13 (20)	112.69 (10.17)	69.23 (8.8)	F= 1.55	F=1.60
	Paramedical	18 (27.7)	111.5 (22.13)	61.44 (17.21)		
	Nursing	7 (10.8)	113.14 (20.63)	72.85 (10.68)		
	Hygiene	17 (26.2)	99.52 (22.88)	60.52 (14.38)		

Table 2. Correlation between age and work experience in occupational stress and resilience in the faculty members in terms of gender in Ahvaz Jundishapur University of Medical Sciences

Variable		Age	Work experience
Occupational stress	Correlation coefficient	-0.050	-0.054
	Significant level	0.716	0.683
	Number	55	60
Resilience	Correlation coefficient	0.225	0.261
	Significant level	0.099	0.044
	Number	55	60

In terms of educations, 11 individuals (16%) had M.Sc. and 54 individuals (83.1%) had Ph.D. (Table 1). The mean of resilience and occupational stress in faculty members were 64.80 ± 14.27 and 109.43 ± 19.88 , respectively. Regarding Pearson correlation coefficient, there was a significant and negative correlation between resilience and occupational stress ($P= 0.016$, $r= -0.297$). Independent T-test (Table 1) did not show significant relationship between gender, education, marital status and type of faculty with occupational stress and resilience ($P>0.05$). The findings showed (Table 2) no significant correlation between occupational stress, age and work experience ($P>0.05$), but there was a direct and significant correlation between resilience and work experience ($P<0.05$).

Discussion

The aim of this study was to determine the correlation between occupational stress and resilience in faculty members of Ahvaz Jundishapur University of Medical Sciences. The results showed that the mean of occupational stress was more than the mean of resiliency in faculty members. Shakirinia et al. showed that the mean of occupational stress (61.41) is more than resilience (56.11) in female nurses (19). Also, Chin Aveh et al., showed that faculty members

at Azad University experience high occupational stress (5). Contrary to our results, Hosseini et al. showed that stress in the staff of Mazandaran University of Medical Sciences was at low and desirable level (20). In the study of Komeili et al. the mean of occupational stress of nurses in hospitals affiliated to Ahvaz Jundishapur University of Medical Sciences (183.08 ± 54.07) was reported and the results showed the normal to average level of occupational stress in most nurses (21). There was no significant difference between the genders of the faculty members in the level of resilience and occupational stress in the current study. Contrary to the results, Khatuni et al., showed that there was a significant correlation between genders in occupational stress in accountants at Qazvin University of Medical Sciences, so that women experienced more occupational stress (22). In the study of Blix et al., female faculty members compared with the male ones experienced a higher degree of occupational stress (4). The study of Kamali Ardakani et al. on medical students showed that there was no significant difference in occupational stress between men and women (23). In the present study, one of the reasons for the high stress and resilience of the men is probably the high population of male faculty members. High stress in women is probably due to the fact that, in addition to

the duties of the workplace, they are responsible for the care of children and the work of the house, and this will increase their stress. There was no significant correlation between education level, marital status, as well as age in occupational stress and resiliency. However, in contrary to these results, Khatuni et al., found out that employees with less age and work experience have more stress (22). The results of this study showed that there is a significant and inverse relationship between occupational stress and resilience. This is in contrast to the results of the study carried out by Mahdiah et al. (24) and consistent with the results of the study carried out by Shakerinia et al. (19). Menez et al. indicated that those with higher resilience are less likely to develop burnout (25). It seems that increased resilience in faculty members reduces job stress.

Conclusion

Since resilience can be a predictor in the prevention and reduction of occupational stress, it is suggested that formal and informal educational programs, tours and group participation among faculty members should be held to increase the resilience of members. Also, considering that the present study aimed to obtain baseline information on correlation between resiliency and occupational stress, it is suggested that the role of training and resiliency skills and its predictors on Job stress directly and empirically should be investigated.

Ethical disclosure

In this study, tests that threatened the health of individuals were not used.

Acknowledgements

This paper is extracted from the research project number 95s51, dated June 25, 2016 with the code IR.AJUMS.REC.1396.522, which was registered at the Deputy Director of Research and Technology Development of Ahwaz Jundishapur University of Medical Sciences. Thus, the researchers announce their gratitude to all individuals and organizations who helped in this research.

Authors' contribution

All the authors have accepted responsibility for the entire content of this submitted manuscript and approved submission.

Conflict of interest

No conflict of interest has been reported by the authors.

Funding/Support

None declared.

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