

Studying occupational stress causing factors in staff of different units of forensic medicine center in Iran Northwest Provinces

Samadirad Bahram¹, Nazari Jalil^{2,*}, Hasirchi Nahid³, Baybordi Fatemeh⁴

¹Forensic Medicine Research Center, Iranian Forensic Medicine Organization

^{2,*}Department of Occupational Health, Health School, Tabriz University of Medical Sciences, Tabriz,

³Aftiyeh School, Education District 4 East Azarbaijan Province

⁴Research Unit, Forensic Medicine Administration of East Azarbaijan Province

Abstract

Introduction: Stress is one of the major problems of living in industrial societies. Job and career issues are the most important causes of stress. Job stress is one of the important factors in causing psychological injury and illness in staff and decreasing productivity in organizations. Since human resources are among the most important assets of any organization, identification of the factors causing job stress is very crucial. Therefore current study aimed to investigate the causes of occupational stress in the staff of different units of the forensic medicine centers in the Northwest Provinces.

Materials and Methods: A Descriptive-analytical study was designed and conducted among 166 employees of the various units of the forensic medicines centers of Tabriz, Urmia, Ardebil and Zanjan cities by census statistical method during 2016-2017. Data were collected using questionnaires consist of demographic information and Cooper job stress questionnaires. The collected data were analyzed using SPSS software adopting t-test for independent groups, ANOVA, chi square, Pearson and Spearman correlation coefficients, at the significant level of $P < 0.05$.

Results: It was found that about 50% of the staff had moderate job stress and more than 12% had severe job stress. The comparison of mean job stress between healthy and ill individuals showed that the patients had a higher mean of job stress than healthy individuals, and this difference was statistically significant ($P < 0.001$). The study of interference between work and life issue (family) also showed that the people whose work always interferes with their life issues had higher mean job stress than the other two groups and the difference was statistically significant ($P < 0.001$). The result of this study also showed that there is a significant direct relationship between job stress and smoking ($P < 0.045$), work interference and life issue ($P < 0.001$), and a significant inverse relationship ($P < 0.044$) with literacy. Lower incomes, shifting the place of work, the heavy work, the ignorance of the managers to work problems, dealing directly with the people, the pressures due to the completion or working against deadlines, and the lack of hope for job promotion, respectively, are the factors causing stress in the organization.

Conclusion: Compared with employees of other organizations, the forensic medicines staff seemed to have a much higher prevalence of stress. The organizational authorities could help staff to improve the quality of life and reduce occupational stress by creating the correct communication, desirable support and generating the appropriate environment for job activities.

Keywords:

Occupational stress, Forensic Medicine Staff, Northwest Provinces

*Corresponding author: Jalil Nazari

Email Address: nazari_j@yahoo.com

1. Introduction

Stress is one of a major problem of living in industrial societies and occupational and career issues are the most important causes of stress [1]. There is also more stress in jobs that demands human communication [2]. According to the Karasek Demand-Control Model (1979), occupations associated with high work stress and low control cause psychological and physical distress [3]. The presence of such work environments ultimately declines employees' emotional and psychological resources, and the onset of burnout syndrome is likely [4]. Improper ways to deal with job stress have dangerous consequences for both individual and organizational [5]. The amount of stress varies in various jobs and affairs, and occupations that deal with human services create a lot of stress. Meanwhile, the impact of stress on medical care staff, due to the complexity of work, is more impressive and recognized as an important and influential factor [6-7]. To deal with and reduce occupational stress, it is necessary to know the causes and the amount of this stress [8].

Forensic medicine and the services provided by its units are among the occupations that deal with human services in unnatural conditions, and these services are a process that originates from a two-way communication between the forensic staff and the person receiving the services. Any factor that disrupts this two-way relation can disrupt forensic services, and this impairment can influence the quality of forensic services given to individuals. The managers of the organization must pay enough attention to the mental and physical health of the forensic medical staff, which can affect the course of services and be

effective in achieving organizational goals. Therefore the present study was designed to investigate the causes of occupational stress in the staff of different units of the forensic medicine centers in the Northwest Provinces.

2. Materials and Methods

A Descriptive-analytical study was designed and conducted on employees of the various units (administrative, laboratory, description, and examinations units) of the forensic medicines centers of Tabriz, Urmia, Ardebil, and Zanzan cities by census statistical method during 2016-2017. Data were collected using a questionnaire. The questionnaire consisted of two parts; the first part of which was questions about personal and job characteristics and the second part was the Cooper Job Stress Questionnaire [9]. Criteria for entering staff in the study were as follow; working in one of the forensic medicine units in the northwestern provinces, not completed this questionnaire before, healthy subjects and without any disabilities, immediate family members without any chronic and incurable diseases, and mental and physical disability and severe stress and anxiety (death of a loved one, divorce, severe accidents, person Addicted in the family).

After the necessary explanations regarding the study objectives, the questionnaires distributed among the qualified volunteers. Of the 180 collected questionnaires, only 166 questionnaires were acceptable to use in the study. The acquired data were analyzed by using SPSS software (version 16). Data analysis was conducted using chi-square statistical test, Spearman, Pearson correlation coefficient,

t-test, and one-way analysis of variance (ANOVA) and $P < 0.05$ was considered as the significance level.

3. Results and Discussion

From the 166 attended eligible subjects, from various units of the Forensic Medicine Organization, 116 subjects were men and 50 subjects, women. The result of study showed that about 50% of the staff had moderate job stress and more than 12% had severe job stress. Considering the result of average job stress showed that the highest and lowest amount of stress was amongst 43-52 and 53-62 year's age groups respectively. Carrying the ANOVA test confirmed a statistically significant difference ($P < 0.015$) between age groups. A comparison of the results of the study also showed that smokers had high job stress than non-smokers. Carrying analysis of the t-test also confirmed a statistically significant difference ($P < 0.034$) between the average job stress of smokers and non-smokers. The comparison of mean job stress between healthy and ill individuals showed that the patients had a higher mean of job stress than healthy individuals, and this difference was statistically significant ($P < 0.001$). The study of interference between work and life issue (family) also showed that the people whose work always interferes with their life issues had higher mean job stress than the other two groups and the difference was statistically significant ($P < 0.001$).

The result of this study also showed that there is a significant direct relationship between job stress and smoking ($P < 0.045$), work interference and life issue ($P < 0.001$), and a significant inverse relationship ($P < 0.044$) with literacy.

The results of the study showed that subjects with 6-20 years and ≥ 5 years of work experience had the highest and the lowest amount of job stress respectively, while the subjects with more than 20 years of work experience showed a decline in stress. Conducting a one-way analysis of variance (ANOVA) test revealed a statistically significant difference ($P < 0.001$) between them.

Analysis of the data using the Pearson correlation test revealed a significant association between work experience and job stress ($P < 0.004$). Analyzing the data using Spearman's correlation test also showed a direct and significant association between job stress and smoking ($P < 0.045$), interference with personal issues ($P < 0.001$), and an inverse relationship with literacy level ($P < 0.044$). But there weren't any significant relationships among job stress and variables such as sex, age, height, weight, and body mass index, marital status, and dominant hand, type of employment, working hours, and sleep time.

According to the result of the study, the average job stress in research units was 46.6. But a more precise consideration showed that about 60% of subjects in the study have moderate and high job stress. It was found that about 50% of the staff had moderate occupational stress and more than 12% had severe job stress.

Lower incomes, shifting the place of work, the heavy work, the ignorance of the managers to work problems, dealing directly with the people, the pressures due to the completion or completion of deadlines for doing things, and the lack of hope for job promotion, respectively, are the factors causing stress in the organization.

4. Conclusion

Compared with employees in other organizations, the forensic medicines employees appeared to have much higher prevalence of stress. The results of the present study confirmed that anyone in any place and situation feels some degree of stress in their work environment, and this is visible and undeniable in today's modern organizations [10]. As the results of this study also revealed, employees, working in different units of the organization in their work environment deal with various stressors that can affect their general health. Depending on the position of the organization, job stresses affect the quality of their work. It wastes national assets and reduces their productivity. Therefore, the authorities of the organization by creating the correct communication, desirable support and generating the appropriate environment for job activities could help staff to improve the quality of life and reduce occupational stress.

5. Acknowledgments

This project was funded and supported by research deputy of Forensic Medicine of East Azarbaijan Province. The authors also wish to thank all of the members of the research team and others who participated in the study. The authors declare that there is no conflict of interest.

6. References

- [1] Randall R, Altmayer E. Job stress, stress and anxiety management for the individual and the organization. Translation: Gholamreza Khajehpour. Tehran: Reflections; 2013. p-21.
- [2] Anjazab B, Farnia F. Relationship between job stress and psychological-behavioral responses of midwives working in public hospitals of Yazd in 1999. J Yaz Univ Med Sci. 2002;10(3):32-8. [Persian]
- [3] Birch L. Stress in midwifery practice: an empirical study. Br J Midwifery. 2001; 9(12):730-
- [4] Yaghobian M, Parezizgar S. A study of Job stress among nurses working in hospitals in eastern of Mazandaran province in 1999. Armaghan Danesh, Yasuj University of Medical Sciences. 2002; 7(25):13-20. [Persian]
- [5] Lambert V, Lambert C, Itano J, Inouye J, Kim S, Kuniviktikul W, et al. Cross-cultural comparison of workplace stressors, ways of coping and demographic characteristics as predictors of physical and mental health among nurses in Japan, Thailand, South Korea and the USA (Hawaii). Int J Nurs Stud. 2004;41:671-684.
- [6] Sauter S, Murphy L. Stress at work. Atlanta:DHHS (NIOSH) Publication;1999. Available from: [http://www.freeoshainfo.com/pubpages/Files/Workplace%20Stress/WorkplaceStress Information.pdf](http://www.freeoshainfo.com/pubpages/Files/Workplace%20Stress/WorkplaceStress%20Information.pdf).
- [7] Yaghoobi M, Karimi S, Javadi M, Hasan zade A. A Survey on Relationship between Job Stress and Three Dimensions of Organization Commitment among Nursing Managers. J Hamedan Univ Med Sci. 2010;18(1):5-10. [Persian]
- [8] Trygstad L. Stress and coping in psychiatric nursing. Journal of Psychosocial Nursing 1986; 24(10): 23-27.
- [9] Cooper, Cary L. The stress check: Coping with stresses of life and work. London: Prentice-Hall Publication; 1981. p.101-108.
- [10] Weightman J. Introducing organization behavior. Harlow: Addison Wesley Longman; 1999. 21.