Job Stress among Iranian Prison Employees

J Akbari¹, R Akbari², F Farasati³, B Mahaki⁴

Abstract

Background: Exposure to job stress causes deleterious effects on physical and mental health of employees and productivity of organizations.

Objective: To study work-related stressors among employees of prisons of Ilam, western Iran.

Methods: In a cross-sectional study conducted from July to October 2013, 177 employees of Ilam prisons and security-corrective measures organization were enrolled in this study. The UK Health and Safety Executive Organization 35-item questionnaire for assessment of occupational stress was used to determine job stress among the studied employees.

Results: Job stress was highest among employees of “correction and rehabilitation center” of Ilam province followed by “Dalab vocational training center.” There was no significant relationship between occupational stress and age, work experience, level of education, marital status, sex of employees, and obesity.

Conclusion: Employees of prisons, for their nature of job and work environment, are exposed to high level of occupational stress.

Keywords: Work; Prisons; Criminology; Workplace; Stress, psychological; Burnout, professional; Age factors; Sex factors; Iran

Introduction

Prison is one of the important parts of the criminal justice system, where its work condition makes its workers encounter various types of stress. Those include closed forced work environment, need to act violence and doing difficult duties, duties relating to safety and discipline maintenance and law enforcement in prison, working for a long time, irregular work shift and high incidence of certain diseases among prisoners that would harm prison employees’ health.¹³

There are 217,000 prisoners who have committed different crimes in Iran and are maintained in 249 centers.⁴ It is dangerous and often stressful to work in such environments.⁵ Prison employees face many mental and physical health problems due to their workplace condition. Occupational stress and work environment stressors are realities in security organizations like prisons, with detrimental consequences for the organization⁶ and its employees. Examples of health problems commonly reported in prison staff members include mental health problems⁷,⁸ and physical health issues,⁹,¹⁰ particularly, emotional and behavioral disorders such as depression,¹¹-¹⁵ anxiety,¹⁴,¹⁵ sleep disturbances,¹⁶ burnout,¹⁷,¹⁸ alcohol abuse,¹⁹,²⁰ early retirement,²¹ and coronary artery diseases²²,²³.

In addition to its psychological and
physical effects, occupational stress can also cause organizational problems such as job dissatisfaction, job turnover, high rate of absenteeism, increased job events, decreased job performance and organizational commitment.

Many studies have so far been conducted on mental health and job stress among prison staff. Tewksbury and Higgins showed that job stress generally is resulted from organizational problems such as role conflict, emotional abnormality and job control, and that contrary to popular belief, the percentage of one’s work time spent in contact with inmates reduces the experience of work stress. Previous studies showed that job stress among prison employees is high, more than that found among military employees, however, the nature of stress is different depending on the job category among prison employees.

To improve the work environment, better understanding of the nature of the job stress of prison employees is necessary. We therefore conducted this study to determine the level of occupational stress, its relation with organizational and individual variables, and the factors that would cause job stress among prison employees in Iran.

Materials and Methods

This cross-sectional study was conducted between July and October 2013 in Ilam, western Iran. All employees of Ilam prisons and security-corrective measures organization were enrolled in this study.

There are four prisons in Ilam province—the central prison of Ilam, Dalab vocational training center, prison of Darrehshahr, and correction and rehabilitation center. Only those employees whose job necessitates direct contact with prisoners were included in the study. These include five job groups—health care workers, protection unit employees, social workers, office workers, and correctional officers. Only those who had at least one year of work experience in the prison where they worked in, those who had general health, and those who accepted to complete job stress questionnaire were included in the study. The exclusion criteria included unwillingness to cooperate, incorrect completion of the job stress questionnaire sub-scales, and having interfering mental or physical disorders such as depression and mental disorders, cardiovascular problems, and hematological and sever musculoskeletal diseases. After applying the inclusion/exclusion criteria, 177 employees left and included in the final analysis.

Measurement of Work-related Stressors

The UK Health and Safety Executive (HSE) Organization has designed a 35-item questionnaire to determine stressors defined in management standards for occupational stress in seven areas. The domains are based on the following subjects:

1) Demand (8 questions, maximum score: 35): the types of demands made on workers in areas such as workload, working patterns and working environment; 2) Control over work (6 questions, maximum score: 30): determines the extent to which individual performs his/her own duties properly; 3a) Support from management (5 questions, maximum score: 25): shows support received by individual including that from managers and the organization in general; 3b) Support from colleagues (4 questions, maximum score: 20); 4) Relationship at work (4 questions, maximum score: 20): presents collective connections and prevents dispute and struggle at workplace; 5) Role or responsibility (5 questions, maximum score: 25): presents understanding an individual role within the organization; and 6) Changes, organizing method and human resources of an organization (3 questions, maximum score: 15). It is necessary to mention that in some
studies two areas of “support from management” and “support from colleagues” are combined and the questionnaire has six areas. The response to questions included a five-level Likert scale (strongly disagree, disagree, neither agree nor disagree, agree, and strongly agree). Higher scores reflected more health and safety regarding stress while lower scores showed more stress among the study participants. To obtain an optimum response rate, we considered a response rate of >50%, >60%, >70% and >80% as “enough,” “optimum,” “good,” and “excellent,” respectively. Validity and reliability of HSE job stress questionnaire in Iran has been assessed by Marzabbadi, et al. All participants were asked to complete the questionnaire. Demographic data were also collected for each worker. Statistical analyses were done using SPSS® for Windows® ver 20. A p value <0.05 was considered statistically significant.

**Results**

Demographic characteristics of the employees are presented in Table 1. Tables 2 and 3 present the mean values of the seven

![Table 1: Demographic characteristics of the Subjects](image-url)

| Variables                  | Central prison of Ilam | Dalab vocational training center | Prison of Darrehshahr | Correction and rehabilitation center | Total       |
|----------------------------|------------------------|---------------------------------|-----------------------|---------------------------------------|-------------|
| Age (yrs)                  | 31.2 (4.8)             | 34.0 (6.8)                      | 31.8 (5.5)            | 34.3 (7.9)                            | 32.3 (5.9)  |
| Body Weight (kg)           | 77.39 (8.44)           | 79.45 (10.21)                   | 81.31 (8.96)          | 77.14 (11.66)                        | 78.35 (9.33)|
| Height (cm)                | 176.1 (7.5)            | 177.6 (5.4)                     | 180.6 (5.4)           | 176.9 (4.8)                           | 177.0 (6.6) |
| BMI (kg/m²)                | 25.0 (1.2)             | 25.2 (2.9)                      | 25.0 (2.5)            | 24.6 (3.1)                           | 25.0 (2.4)  |
| Experience (yrs)           | 6.7 (4.4)              | 9.7 (6.8)                       | 7.2 (5.4)             | 9.6 (6.7)                            | 7.8 (5.6)   |
| Working hours per week     | 59.6 (12.8)            | 50.7 (7.8)                      | 61.3 (17.4)           | 58.2 (17.7)                          | 57.6 (13.3) |
| Overtime per month         | 97.5 (47.2)            | 83.3 (65.1)                     | 62.5 (55.6)           | 12.5 (3.5)                           | 88.9 (50.9) |

**TAKE-HOME MESSAGE**

- Prisoner employees face many mental and physical health problems due to their workplace condition.
- Prison employees who are in close contact with prisoners who committed different crimes, are at risk of developing job stress.
- Exposure to job stress causes deleterious effects on physical and mental health of prison employees and productivity of organizations.
- Doing difficult duties, law enforcement in prison, working for a long time, irregular work shift, and high incidence of certain diseases among prisoners, could threaten the prison employees’ health.
- Health care workers who deal with health status of prisoners and being in close contact with some of the prisoners had the highest job stress.
- Occupational stress can cause organizational problems such as job dissatisfaction, job turnover, high rate of absenteeism, increased job events, decreased job performance and organizational commitment.
- Job stress among prison staff members are more than that found among military employees.
The highest job stress was recorded from prison of Darrehshahr among health care workers; the lowest stress was also recorded for prison of Darrehshahr among correctional officers.

Multivariate linear regression analysis revealed that among the seven subscales of job stress, “control over work” had a significant correlation with the type of job (p=0.002) and prison (p=0.019). Also “support from colleagues” had a significant (p=0.041) correlation with gender of the employee. “Relationship at work” subscale had significant relationship with sex of employees (p=0.026) and type of prison (p=0.008). The subscale “role” had significant relationship with age of employees (p=0.008), body mass index (BMI) (p=0.048), and their job (p=0.032). Other studied subscales of job stress had no significant correlation with the demographic characteristics considered in this study. No significant correlation between the individual qualitative and quantitative variables and HSE occupational stress were observed.

**Discussion**

Prison employees experience various job stressors because of the nature of their job in managing and controlling prisoners. We

| Table 2: Means of job stress and its affecting factors based on type of prison |
|---------------------------------------------------------------|
| **Prison** | Demand | Control | Management support | Colleagues support | Relationships at work | Role | Change | Job stress |
|----------------|--------|---------|--------------------|--------------------|---------------------|------|--------|------------|
| Central prison of Lam | 23.11  | 17.96   | 14.55              | 11.05              | 12.47               | 10.72| 8.87   | 98.73      |
| Dalab vocational training | 23.46  | 18.53   | 14.63              | 9.87               | 12.43               | 8.63 | 8.39   | 95.90      |
| Center prison of Darrehshahr | 22.52  | 20.44   | 16.04              | 9.84               | 13.08               | 8.28 | 8.92   | 99.12      |
| Correction and rehabilitation center | 21.42  | 17.14   | 13.14              | 9.04               | 10.14               | 7.95 | 7.61   | 86.44      |
| **Total** | **22.90** | **18.35** | **14.61** | **10.37** | **12.27** | **9.56** | **8.62** | **96.68** |

| Table 3: Means of job stress and its affecting factors based on type of job |
|---------------------------------------------------------------|
| **Job groups** | Demand | Control | Management support | Colleagues support | Relationships at work | Role | Change | Job stress |
|----------------|--------|---------|--------------------|--------------------|---------------------|------|--------|------------|
| Protection unit | 22.93  | 18.81   | 15.04              | 9.92               | 11.63               | 9.57 | 8.46   | 96.36      |
| Health care    | 23.12  | 15.50   | 14.12              | 9.87               | 12.12               | 7.10 | 6.75   | 88.58      |
| Social work    | 25.33  | 19.00   | 15.00              | 8.66               | 14.00               | 8.33 | 8.33   | 98.65      |
| Office         | 22.56  | 17.84   | 15.60              | 11.04              | 12.04               | 8.92 | 9.24   | 97.24      |
| Correctional officer | 23.68  | 20.68   | 15.68              | 9.68               | 14.12               | 6.87 | 9.18   | 99.89      |
| **Total**      | **22.97** | **18.63** | **14.95** | **10.26** | **12.56** | **9.24** | **8.64** | **97.25** |
found that job stress was highest among employees of “correction and rehabilitation center” of Ilam province followed by “Dalab vocational training center.” In the former center, the prisoners are 18 years old or younger. In the latter center, addicts are maintained. In “central prison of Ilam” and “prison of Darrehshahr,” where job stress was lower, prisoners with public crimes are maintained; prisoners in “prison of Darrehshahr” committed unserious crimes than prisoners detained in other prisons, and thus, job stress was lower among its employees.

Characteristics of each job must be taken into account in assessment of job stress. Some studies showed that certain work environments could induce more stress than others and that prison is one of such workplaces. The four prisons studied hold prisoners for different types of crimes; the numbers of prisoners and prison employees are also different. No surprise, we expect different work environment and level of job stress.

Before beginning of the current study, because there were more prisoners with serious crimes such as homicide, villainy, rape, etc, in “central prison of Ilam,” and load of prisoners there was more than other prisons, we expected to see the highest job stress in that prison. However, we came to different results. That might reflect the effect of different work environment of prisons on job stress.

Health care workers had the highest job stress. These employees deal with health status of prisoners and being in close contact with some of the prisoners, they carry a higher risk of contracting diseases, especially HIV and hepatitis more than other occupations. Furthermore, because of the psychological pressures and the environment of prison the risk of suicide in prisoners is high. Taking care of these people is thus, stressful. In a study conducted on nurses working in prison, it was found that the nurses experienced a high level of job stress and that their occupational satisfaction was inversely correlated with their occupational stress.

Followed by health care workers, the employees of protection unit had also a high level of job stress. Their job includes responsibilities such as dispatching and escorting prisoners, law enforcement and enforcing discipline, preventing prison riots and escapes, etc. In terms of the reported stress, office and staff members of social work and correctional officers placed next. Correctional officers had the least stress; their duty is to watch different sections of prison and maintain the security and discipline inside sections. Our findings were in agreement with results of other studies that showed different environmental conditions and jobs affects the level of job stress.

Employees of the correction and rehabilitation center had the least amount of stressors in each seven areas of work-related stressors compared to employees of other prisons. They reported less occupational needs including less perception of work load, work pattern and work environment. They also had less control on their job, and received less support from the managers and colleagues. In addition, relationships in work environment, correct understanding of the role of employees in this prison and also understanding of the management method and communication of organizational changes among the employees were less than those observed in other prisons. It seems that the seven areas of work-related stressors were not sufficiently managed in this center. Existence of these stressors in the work environment develops inappropriate health condition, low work efficiency and increased absenteeism.

Unlike all studies that reported significant relationship between occupational stress with age, work experience, level
of education, marital status, sex of employees, and obesity. None of these variables had significant correlation with the occupational stress in our study.

Prisons in different countries are different in terms of their facilities, employees and prisoners' race, feeding habit, well-being, mental health, etc. Most of the studies conducted on job stress among prison employees have been conducted in developed countries, where type of crime, organizational structure, and procedures for their guards are different from those in developing countries. For lack of detailed knowledge on job stress among prison employees in developing countries and for marked cultural and organizational differences among the prison staff members and prisoners, further studies are needed to further clarify this issue.

Acknowledgments

This article is result of a research project in Ilam Prisons, and Security-Corrective Measures Organization, Iran. The authors would like to express their gratitude to Ilam Prisons, and Security-Corrective Measures Organization and its hard-working employees for their sincere cooperation.

Conflicts of Interest: None declared.

References

1. Koo J W, Kim H J. The factor affecting job stress and psychosocial well-being of prison officers. International Congress Series 2006;1294:175-8.
2. Dickinson T, Wright KM. Stress and burnout in forensic mental health nursing: a literature review. Br J Nurs 2008;17:82-7.
3. Metzner JL, Fellner J. Solitary confinement and mental illness in US prisons: a challenge for medical ethics. J Am Acad Psych Law Online 2010;38:104-8.
4. Walmsley R. World Prison Population List. 8th ed. International Centre for Prison Studies King's College London, School of Law. Disponivel em:2012 Available from www.prisonstudies.org/publications/list/40-world-prison-population-list-8th-edition.html (Accessed February 25, 2013).
5. Lambert E, Cluse-Tolar T, Hogan N. This job is killing me: the impact of job characteristics on correctional staff job stress. App Psychol Criminal Justice 2007;3:117-42.
6. Tewksbury R, Higgins GE. Prison staff and work stress: the role of organizational and emotional influences. Am J Criminal Justice 2006;30:247-66.
7. Ghaddar A, Mateo I, Sanchez P. Occupational stress and mental health among correctional officers: a cross-sectional study. J Occup Health 2008;50:92.
8. Godin I, Kittel F, Coppieters Y, Siegrist J. A prospective study of cumulative job stress in relation to mental health. BMC Public Health 2005;5:67.
9. Haugebrook S, Zgoba KM, Maschi T, et al. Trauma, stress, health, and mental health issues among ethnically diverse older adult prisoners. J Correct Health Care 2010;16:220-9.
10. Schnurr PP, Green BL. Understanding relationships among trauma, post-traumatic stress disorder, and health outcomes. Adv Mind Body Med 2004;20:18-29.
11. Pflanz SE, Ogle AD. Job stress, depression, work performance, and perceptions of supervisors in military personnel. Military Medicine 2006;171:861-5.
12. Tsutsumi A, Kayaba K, Theorell T, Siegrist J. Association between job stress and depression among Japanese employees threatened by job loss in a comparison between two complementary job-stress models. Scand J Work Environ Health 2001;27:146-53.
13. Iacovides A, Fountoulakis K, Kaprinis S, Kaprinis G. The relationship between job stress, burnout and clinical depression. J Affect Disord 2003;75:209-21.
14. Newbury-Birch D, Kamali F. Psychological stress, anxiety, depression, job satisfaction, and personality characteristics in preregistration house officers. Postgrad Med J 2001;77:109-11.
15. Rusli BN, Edimansyah BA, Naing L. Working conditions, self-perceived stress, anxiety, depression and quality of life: a structural equation modelling approach. BMC Public Health 2008;8:48.
16. Kalimo R, Tenkanen L, Harmo M, et al. Job stress and sleep disorders: findings from the Helsinki Heart Study. Stress and health 2000;16:65-75.
Job Stress among Iranian Prison Employees

17. Schwarzer R, Hallum S. Perceived teacher self-efficacy as a predictor of job stress and burnout: Mediation analyses. Applied Psychology 2008;57:152-71.

18. Taris TW, Peeters MC, Le Blanc PM, et al. From inequity to burnout: the role of job stress. J Occup Health Psychol 2001;6:303-23.

19. Messina N, Grella CE, Cartier J, Torres S. A randomized experimental study of gender-responsive substance abuse treatment for women in prison. J Subst Abuse Treat 2010;38:97-107.

20. Zlotnick C, Clarke JG, Friedmann PD, et al. Gender differences in comorbid disorders among offenders in prison substance abuse treatment programs. Behav Sci Law 2008;26:403-12.

21. Kerr R, McHugh M, McCrory M. HSE Management Standards and stress-related work outcomes. Occup Med (Lond) 2009;59:574-9.

22. Wamala SP, Mittleman MA, Horsten M, et al. Job stress and the occupational gradient in coronary heart disease risk in women: the Stockholm Female Coronary Risk Study. Soc Sci Med 2000;51:481-9.

23. De Bacquer D, Pelfrene E, Clays E, et al. Perceived job stress and incidence of coronary events: 3-year follow-up of the Belgian job stress project cohort. Am J Epidemiol 2005;161:434-41.

24. Denton M, Zeytinoğlu IU, Davies S, Lian J. Job stress and job dissatisfaction of home care workers in the context of health care restructuring. Int J Health Serv 2002;32:327-57.

25. Griffin ML, Hogan NL, Lambert EG, et al. Job involvement, job stress, job satisfaction, and organizational commitment and the burnout of correctional staff. Criminal Justice and Behavior 2010;37:239-55.

26. Lambert EG, Hogan NL. Wanting change: the relationship of perceptions of organizational innovation with correctional staff job stress, job satisfaction, and organizational commitment. Criminal Justice Policy Review 2010;21:160-84.

27. Lambert E, Paoline lll EA. Take this job and shove it: An exploratory study of turnover intent among jail staff. J Criminal Justice 2010;38:139-48.

28. Westman M, Etzion D. The impact of vacation and job stress on burnout and absenteeism. Psychology Health 2001;16:595-606.

29. Kornitzer M, Sans S, Dramaix M, et al. Job stress and major coronary events: results from the Job Stress, Absenteeism and Coronary Heart Disease in Europe study. Eur J Cardiovasc Prevent Rehab 2006;13:695-704.

30. Sung H-E. Prevalence and risk factors of violence-related and accident-related injuries among state prisoners. J Correct Health Care 2010;16:178-87.

31. Courtney D, Maschi T. Trauma and stress among older adults in prison breaking the cycle of silence. Traumatology 2013;19:73-81.

32. Rundmo T. Risk perception and safety on offshore petroleum platforms—Part II: Perceived risk, job stress and accidents. Safety Science 1992;15:53-68.

33. AbuAlRub RF. Job stress, job performance, and social support among hospital nurses. J Nurs Scholar 2004;36:73-8.

34. Chen JC, Silverthorne C, Hung JY. Organization communication, job stress, organizational commitment, and job performance of accounting professionals in Taiwan and America. Leadership Organization Development Journal 2006;27:242-9.

35. Jamal M. Relationship of job stress and Type-A behavior to employees’ job satisfaction, organizational commitment, psychosomatic health problems, and turnover motivation. Human Relations 1990;43:727-38.

36. Brough P, Biggs A. Occupational stress in police and prison staff. In J Brown and E Campbell (Eds). The Cambridge handbook of forensic psychology. Cambridge University Press, 2010: pp 707-18.

37. Long N, Shouksmith G, Voges K, Roache S. Stress in prison staff: an occupational study. Criminology 1986;24:331-45.

38. Patterson GT. Examining the effects of coping and social support on work and life stress among police officers. J Criminal Justice 2003;31:215-26.

39. Stanton JM, Balzer WK, Smith PC, et al. A general measure of work stress: the stress in general scale. Edu Psychol Measurement 2001;61:866-88.

40. Cousins R, Mackay CJ, Clarke SD, et al. ‘Management standards’ work-related stress in the UK: Practical development. Work Stress 2004;18:113-36.

41. MacKay CJ, Cousins R, Kelly PJ, et al. ‘Management Standards’ and work-related stress in the UK: Policy background and science. Work Stress 2004;18:91-112.

42. Bevan A, Houdmont J, Menea N. The Management Standards Indicator Tool and the estimation of risk. Occup Med 2010;60:525-31.

43. Azad Marzabadi E, Gholami Fesharaki M. Reliability and validity assessment for the HSE job stress questionnaire. J Behav Sci (JBS) 2011;4:291-7.
44. Şenol-Durak E, Durak M, Gençöz T. Development of work stress scale for correctional officers. *J Occup Rehabil* 2006;16:153-64.

45. Armstrong GS, Griffin ML. Does the job matter? comparing correlates of stress among treatment and correctional staff in prisons. *J Criminal Justice* 2004;32:577-92.

46. Pollak C, Sigler R. Low levels of stress among Canadian correctional officers in the northern region of Ontario. *J Criminal Justice* 1998;26:117-28.

47. Massoglia M. Incarceration as exposure: the prison, infectious disease, and other stress-related illnesses. *J Health Soc Behav* 2008;49:56-71.

48. Alarid LF, Marquart JW. Officer perceptions of risk of contracting HIV/AIDS in prison: a two-state comparison. *Prison Journal* 2009;89:440-59.

49. Hellard M, Hocking J, Crofts N. The prevalence and the risk behaviours associated with the transmission of hepatitis C virus in Australian correctional facilities. *Epidemiol Infect* 2004;132:409-15.

50. Woo J-M, Postolache TT. The impact of work environment on mood disorders and suicide: evidence and implications. *Int J Disabil Hum Dev* 2008;7:185-200.

51. Flanagan NA, Flanagan TJ. An analysis of the relationship between job satisfaction and job stress in correctional nurses. *Research in Nursing Health* 2002;25:282-94.

52. Dai J, Yu H, Wu J, *et al.* [Hierarchical regression analysis for relationship between job stress and job burnout in Shanghai employees]. *Chinese Journal of Industrial Hygiene and Occupational Diseases* 2006;24:450. [in Chinese]

53. Rahimi A, Ahmadi F, Akhond AM. [Evaluation of factors influencing occupational stress of nurses in some hospitals in Tehran]. *Hayat J* 2004;10:13-22. [in Persian]

54. Ko JW, Yom YH. The role of social support in the relationship between job stress and job satisfaction/organizational commitment. *Taehan Kanho Hakhoe Chi* 2003;33:265-74. [in Korean]

55. Sori H, Rahimi M, Mohseni H. [Epidemiological pattern of occupational stress in managers in the automobile industry group]. *Gilan Univ Med Sci J* 2006;15:26-35. [in Persian]

56. Winefield HR, Anstey TJ. Job stress in general practice: practitioner age, sex and attitudes as predictors. *Fam Pract* 1991;8:140-4.

57. Nishitani N, Sakakibara H. Relationship of obesity to job stress and eating behavior in male Japanese workers. *Intern J Obesity* 2005;30:528-33.

58. Torres SJ, Nowson CA. Relationship between stress, eating behavior, and obesity. *Nutrition* 2007;23:887-94.