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Occupational stress and addiction potential among psychiatric hospital staff: an analytical study

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ABSTRACT

Background: Employees working in psychiatric hospitals are exposed to high occupational stress (OS) which increases the probability of taking drugs. The present study aims to determine the relationship between OS and addiction potential (AP) among psychiatric hospital staff.
Methods: A total of 150 staff members of Farabi Hospital in Kermanshah in 2019 were selected using convenience methods. Data collection tools included demographic characteristics questionnaire, Elliott Occupational Stress Questionnaire (OSQ), and Weed et all's Addiction Potential Scale (APS).
Results: The 150 employees (59 females and 91 males) with mean age of 39.41 (7.84) were surveyed. The majority of employees, about 116 (77.3%), had low OS. Statistically significant relationships were found between OS plus AP and age group, marital status, educational level, and years of work experience of employees. The mean score of AP had a statistically significant difference between subjects with differences in working hours as well as smoking history. Also, the effect of OS was significant on the level of AP, active AP, and passive AP (all P < .05).
Conclusion: Considering the effect of OS on the level of AP, it is suggested that targeted interventions are planned and designed to reduce OS among psychiatric hospital staff.

Introduction

One of the most important areas of health development in communities is the health sector, which is directly related to human health. In this regard, employees working in hospitals are considered as a highly stressed occupational group (Linden et al., 1996).

Occupational stress (OS) is a combination of stressors and occupation-related situations that most people agree on when it comes to stress (Ras, 2002). Stress can affect physical and mental conditions, and these effects can be a mechanism for disrupting an individual's health and behavior (Frone, 2008; Margolis & Kroes, 1974).

The idea that working conditions can lead to taking drugs has been established for many years. People often cite stress, work, personal stress, anxiety and depression, or other stressful life incidents as factors in initiating illicit drug use and eventually developing clinical substance use syndromes (Clark & Sayette, 1993; Khantzian & Albanese, 2008; Swendsen et al., 2000).

Stress affects health through behavioral changes, and there is evidence that at high levels of stress, health-promoting behaviors are reduced while health-threatening ones such as using nicotine, alcohol, and other drugs increase. Thus, individuals are more likely to engage in behaviors that increase the risk of disease and injury (Milgrom & Burrow, 2001).

In recent years, studies have shown that absenteeism from work in drug users is twice or three times as large compared to other employees. Drug users are three times more likely than other employees to ask for medical treatment allowances and five times more probable to request compensation (Taheri Nakhost, 2011). In workplaces, 25–30% of work-related accidents are due to taking drugs. Drug usage accounts for 50% of all causes of declining production in factories. In Iran, drug users experience 12 times more accidents outside the workplace than other employees and they devote less than 60% of their energy to work (Taheri Nakhost, 2011).

Studies have shown that for hospital staff, stressors in the workplace along with cultural and socio-economic contexts uniquely contribute to the tendency to taking drugs (Patwary et al., 2013). The present study aims to determine the relationship between OS and addiction potential (AP) among the staff of Farabi Psychiatric Hospital in Kermanshah, Iran.

Methods

This is an analytical-correlation study, which was performed to investigate the relationship between occupational and the level of AP in the staff of Farabi Hospital in Kermanshah, Iran. The statistical population of the study included all employees of

Farabi Hospital in Kermanshah in 2019 who had at least three years of work experience and no record of chronic mental and physical illness. Based on the type of study and taking into account the number of employees in Farabi Hospital, which is about 350 individuals as well as considering the Morgan sampling formula in limited communities, the sample size was determined 150 subjects, at an error level of 5% and a ratio of 50%. They were selected from the study population with inclusion criteria by the convenience sampling method.

In the research method section, individuals were selected via convenience sampling method according to inclusion criteria (having at least three years of work experience and no history of obvious mental or physical illness) plus exclusion criteria (history of drug-related disorders). All individuals were assessed for demographic characteristics, OS, and AP.

All employees participating in the study were aware of the research study and fully knew the details of the project as well as the implementation method. After collecting the data and completing the specified sample size, the collected data of all 150 individuals was computed by SPSS software and finally analyzed by relevant statistical methods.

Measurement instruments

Elliot occupational stress questionnaire (1994)

This Elliott questionnaire was devised in 1994 including 20 items which aims to assess the level of stress in individuals. The answers to questions are based on a range of 4 points from "never" to "always" (never, 1 sometimes 2, often 3, always 4). A) Score 20 to 29: This indicates a high degree of control over one's life and a high level of identity and self-esteem. B) Score 30 to 49: It reflects healthy life and ability to control one's life, but sometimes in a stressful situation, negative views occur about oneself which causes anxiety. C) Score 50 to 69: The Such a person often feels depressed and trapped, and this is due to having a negative view of self. D) Score 70 to 80: This shows mental crisis along with mental conflict. The validity of this questionnaire was determined by Elliott and its reliability was calculated by Cronbach's alpha of 0.72. In the study of Jahanbakhsh Ganjeh and Oreyzi (2012), the reliability of the questionnaire was found 0.75.

Iranian addiction potential scale (IAPS)

The APS was developed by Weed et al. (1992) and efforts have been made to determine its validity in Iran. This questionnaire is the Iranian version of AP, which was developed by Zargar et al. (2007) according to the psycho-social conditions of Iranian society. It consists of two factors and has 36 items plus 5 lie detector items. Each item is scored on a continuum from zero (strongly agree) to 3 (strongly agree). Meanwhile, this scoring method will be reversed in items 6, 12, 15, and 21. This questionnaire has a lie detector factor included in items No. 12, 13, 15, 21, and 33. To obtain the total score of the questionnaire, the total scores of all items (except for the lie detector ones) must be added together. This score will range from 1 to 118. Higher scores indicate that the respondent has more AP, and vice versa.

Ethical approval

The present study was conducted according to the Helsinki Declaration. The study was approved by the ethics committee of the vice chancellery of research and technology, Kermanshah University of Medical Sciences (IR.KUMS. REC.1397.034).

Data analysis

In addition to descriptive statistics, the data analysis was performed using frequency, percentage, mean and standard deviation, Chi-square test, plus Independent T-Test, One Way ANOVA, Pearson correlation, and univariate linear regression. All analyses were performed using SPSS20 statistical software at an error level of 0.05.

Results

A total of 61 employees (40.7%) were within the age range of 36–45 with the lowest frequency of the age range being related to 38 (25.3%) individuals who were over 45. Also, 59 (39.3%) subjects were females and 91 (60.7%) were males, with 120 (80%) subjects being married.

The majority of employees, 122 (81.3%), had a master's degree or higher and 10–15 years of work experience. In terms of occupation, 35 were therapists, 30 nurses, 64 clerks, and 21 service providers. The majority of employees, i.e., 76 subjects (50.7%), worked on shifts. Ten subjects (6.7%) were smokers (Table 1).

AP was reported to range from 22 to 89, with a mean of 50.73 (15.56), active AP range from 11 to 68 with a mean of 36.21 (15.45), and passive AP ranged from 4 to 26 with a mean of 16.18 (5.47; Table 1).

Further, 116 (77.3%) subjects had low OS, 31 (20.7%) had moderate OS, and only 3 (2.0%) employees were diagnosed as being OS-free. None of the employees were in the severe stress category (Table 1).

As the age group of employees increased, the percentage of subjects without OS and even those with low OS decreased. However, with increasing age of employees, the frequency of subjects with moderate OS increased (X^2 = 18.578, p < .05). At all levels of OS, the OS was 4 times greater in married employees compared to single subjects (X2 = 12.368, p < .05). Also, at low or medium OS levels, the OS was far higher in employees with undergraduate and higher education than those with postgraduate and lower education (X2 = 7.693, p < .05). In addition, most subjects with low OS had a work experience of 5–10 years, while in the group of subjects with moderate OS, employees with more than 15 years of work experience were in the category of subjects with moderate OS levels (X2 = 18.439, p < .05; Table 1).

The mean APS score in the two age groups of 36–45 and above 45 years was significantly higher than in the age group of 25–35 years. Also, this mean score was reported higher in men than in women with a statistically significant difference. However, in people with undergraduate education, the AP was significantly higher than in those with diploma and

Table 1. Demographic characteristics and their relationship with OS and AP in the employees under study.

Variable	Levels	N (%)	OS levels N (%)			X² (p-value)	AP M (SD)	(p-value)	
			20–29 (No stress)	30–49 (Low stress)	50–70 (Moderate stress)				
Age	25–35	51 (34.0)	2(66.7)	46(39.7)	3(9.7)	18.578	40.75(10.98)	F = 22.495	12.943**(<0.0001)
	36–45	61 (40.7)	1(33.3)	48(41.4)	12(38.7)	(0.001)	53.69(14.01)	(<0.0001)	−18.62**(<0.0001)
	Above 45	38 (25.3)	0(0.0)	22(19.0)	16(51.6)		59.37(16.27)		−5.680(0.115)
Gender	Female	59 (39.3)	2(66.7)	43(37.1)	14(45.2)	1.630	46.08(13.67)	T = −3.796	−7.549**(<0.0001)
	Male	91 (60.7)	1(33.3)	73(62.9)	17(54.8)	(0.443)	53.74(16.03)	(<0.0001)	
Marital status	Single	30(20.0)	3(100.0)	22(19.0)	5(16.1)	12.368	43.10(13.74)	T = −3.086	−9.533**(0.002)
	Married	120(80.0)	0(0.0)	94(81.0)	26(83.9)	(0.002)	52.63(15.45)	(0.002)	
Education	High diploma and less	28(18.7)	0.0(0.0)	17(14.7)	11(35.5)	7.693	59.50(14.73)	T = 3.425	10.79**(0.001)
	High Bachelor and more	(81.3)122	3(100.0)	99(85.3)	20(64.5)	(0.021)	48.71(15.09)	(0.001)	
Income (Million Tomans)	< 2.5	34(22.7)	1(33.3)	26(22.4)	11(35.5)	2.603	54.05(14.50)	F = 1.268	4.91(0.253)
	2.5–3.5	62(41.3)	1(33.3)	61(52.6)	13(41.9)	(0.626)	49.13(15.31)	(0.284)	3.51(0.591)
	> 3.5	54(36.0)	1(33.3)	29(25.0)	7(22.6)		50.54(16.94)		−1.407(0.894)
Work experience	<5	16(10.7)	2(66.7)	12(10.3)	2(6.5)	18.439	38.13(13.75)	F = 9.028	−23.67**(<0.0001)
	5–10	46(30.7)	0(0.0)	41(35.3)	5(16.1)	(0.005)	47.65(12.22)	(<0.0001)	−14.39**(0.003)
	10–15	68(45.3)	1(33.3)	51(44.0)	16(51.6)		52.51(14.64)		−9.52(0.109)
	Above 15	20(13.3)	0(0.0)	12(10.3)	8(25.8)		61.80(18.51)		−4.863(0.295)
Terms of occupation	Therapists	35(23.33)	0(0.0)	23(19.18)	12(38.71)	7.128	40.0(13.15)	F = 3.036	−13.53*(0.033)
	Nurses	30(20.0)	0(0.0)	22(18.96)	8(25.80)	(0.309)	53.54(14.67)	(0.032)	−11.412(0.062)
	Clerks	64(42.66)	1(33.3)	57(49.13)	6(19.35)		51.41(13.66)		−13.69*(0.038)
	Service providers	21(14.0)	2(66.7)	14(12.07)	5(16.13)		53.70(16.88)		−2.28(0.253)
Shift work	Morning	52(34.5)	0(0.0)	40(34.5)	12(38.7)	4.085	50.12(12.90)	F = 3.59	−8.57(0.074)
	Full 24 hours	22(14.66)	0(0.0)	16(13.80)	6(19.4)	(0.395)	58.68(16.75)	(0.030)	1.273(0.889)
	Rotational	76(50.7)	3(100.0)	60(51.7)	13(41.9)		48.84(15.56)		9.84*(0.024)
History of smoking	Yes	10(6.7)	0(0.0)	7(6.0)	3(9.7)	0.740	21.88(5.64)	T = −2.299	11.54*(0.023)
	No	140(93.3)	3(100.0)	109(94.0)	28(90.3)	(0. 691)	19.31(3.63)	(0.023)	
Total			3(100.0)	116(100.0)	31(100.0)		50.73(15.56)		

	M (SD)
Active	36.21(15.45)
Passive	16.18(5.47)
Total score IAPS	50.73(15.56)
Elliot OSQ	43.17(7.39)

university education. Among the occupational categories, the mean AP was higher in the service and guardianship people, nursing, administrative as well as in the therapeutic groups, respectively. Thus, the AP was reported to be higher, with a statistically significant difference, in the therapeutic and nursing groups plus therapeutic and serving groups. It was clearly observed that with the increase of employees' years of work experience, the mean AP alsoincreased. So, employees with work experience of above 15 and 10–15 years had a higher level of AP than those with less work experience and the mean AP score was reported with a statistically significant difference among subjects with work experience under 5 years and over 15 years plus among subjects with 5–10 years and over 15 years. In terms of shifts and working hours, employees with 24-hour working shifts or those with only morning shifts had a higher AP than those whose shifts were rotational. There was a statistically significant difference of the AP level between subjects with 24-hour working shifts and those with rotational work shifts. Further, the AP level was observed higher in subjects who had a history of smoking compared to those without a history of smoking, and this difference was reported to be statistically significant (Table 1).

The study of AP among different levels of OS revealed that the mean AP was higher in employees with moderate OS (66.32), low OS (47.14), and those without OS (28.33), respectively. This suggests that with increasing job OS, the mean AP also increased in employees. There was a statistically significant difference in the mean score of AP among individuals with different levels of OS (P < .0001, F = 30.329). The results of post hoc tests indicate difference between subjects without OS and those with low OS (18.80), among subjects without stress and those with moderate OS (37.99), as well as among subjects with low OS and those with moderate OS (19.18) (all P < .05). The results of these comparisons were strongly significant between subjects without OS and subjects with moderate OS as well as between subjects with low OS and those with moderate OS (all P < .01; Table 2).

Regression results revealed that the OS predictor variable in the regression model alone could explain more than half of the variance of the AP variable (54.0%) and the regression model was significant at the error level of <0.01 (P < 0001, F = 176.035). The effect of OS on AP was found to be progressively increasing and strongly significant (P < .0001, t = 13.268, Beta = 0.737). Also, with elevation of OS, the level of AP increased in the individual and vice versa (P < .0001).

The second model also showed that OS could explain nearly half of the variance of the active AP, i.e., 42.0%., with the effect of OS on active AP being significant (P < .0001, t = 10.45, Beta = 0.652). Also, with the rise in OS, the level of active AP in the individuals increased and vice versa (P < .0001).

OS could explain more than half of the variance of the passive AP, i.e., about 53.0% (R2 = 0.732, R^2_{adj} = 0.532). The effect of OS on passive AP was strongly significant (P < .0001, t = 13.054, Beta = 0.732). With elevation of reduction of OS, the passive AP increased or decreased among the individuals (P < .0001; Table 3).

Discussion

Based on the findings, the mean AP showed a statistically significant difference with the levels of age, gender, marital status, level of education, occupation, work experience, working hours and smoking experience. Specifically, the level of AP in the two age groups of 36–35 and above 45 years was significantly higher than in the age group of 25–35 years. Also, this mean value was reported higher in

Table 2. Comparison between the mean levels of AP among the levels of OS in the surveyed employees.

		Total score of AP			Results of multiple comparisons of means	
	Levels	Min-Max	M (SD)	Mean Equality Test Statistics (p-value)	Groups	Mean difference (p-value)
OS	20–29	24–35	28.33(5.86)	$F_{(2,147)}$ = 30.329 (<0.0001)	(1),(2)	−18.80**(0.042)
	30–40	22–83	47.14(13.93)		(1),(3)	−37.99**(<0.0001)
	41–70	50–69	66.32(10.25)		(2),(3)	−19.18**(<0.0001)

* is significant in < 0.05 . ** is significant in < 0.01 .

Table 3. Prediction of AP and its two domains, active AP and passive AP, based on OS and in the form of three simple linear regression models in the studied employees.

Model Summary			ANOVA				Coefficients [a]		
Dependent variable	Independent variable	R (Adjusted R Square)	Sum of Squares	df	Mean Square	F (p-value)	Beta	t (p-value)	Correlations (p-value)
Total AP y_1	(Constant)	0.543	R = 19599.61	1	R = 19599.61	176.035**	– –	−3.175** (0.002)	– –
	OS	(0.540)	E = 16478.18	148	E = 111.33	(<0.0001)	0. 737	13.268** (<0.0001)	0.737**
			T = 36077.79	149	– –				(<0.0001)
Active AP y_2	(Constant)	0.652	R = 9758.98	1	R = 9758.99	109.191**	– –	−2.410* (0.017)	– –
	OS	(0.421)	E = 13227.60	148	E = 89.38	(<0.0001)	0. 652	10.449** (<0.0001)	0.652**
			T = 22986.59	149	– –				(<0.0001)
Passive AP y_3	(Constant)	0.732	R = 2389.110	1	R = 2389.110	170.402**	– –	−3.966** (<0.0001)	– –
	OS	(0.532)	E = 2075.030	148	E = 14.020	(<0.0001)	0. 732	13.054** (<0.0001)	0.732**
			T = 4464.140	149	– –				(<0.0001)

* is significant in < 0.05 . ** is significant in < 0.01 . R: Regression, E: Eror, T: Total.
y1 = (Constant) + 0.737 (OS); y2 = (Constant) + 0.652 (OS); y3 = (Constant) + 0.732 (occupational stress)

males than in females with a statistically significant difference. This finding was consistent with Rasouli's study (2015), who showed that there was a significant difference between the two genders in AP, where males were more susceptible to addiction. Also, in subjects with at most high-school diploma education, the level of AP was significantly higher than in those with diploma and university degrees. This research finding was in line with the study of Ahmadi and Gholamaliabiz (2004), who found that there was a negative correlation between education and the severity of addiction. This means that lower education and occupational rank is associated with severity of addiction. Subjects with lower levels of education are more vulnerable to and less aware of the phenomenon of drug abuse. Among the occupational categories, the mean AP was higher in the serving and guardianship groups, nursing, administrative groups and in the therapeutic groups, respectively. The level of AP among the therapeutic and nursing groups as well as therapeutic and service groups was reported to have a statistically significant difference. This finding was consistent with the study of Ahmadi and Gholamaliabiz (2004). The results reveled that with increasing years of work experience of employees, the mean AP also increased among the individuals. In this regard, employees with work experience of 10–15 years and even more had a higher level of AP than those with fewer years of work experience. In terms of shifts and working hours, employees with 24-hours/day shifts or those with morning shifts had higher AP than those whose shifts were rotational. There was a statistically significant difference between the level of AP among subjects with 24-hour/day shifts and those with rotational shifts. Also, the level of AP was higher in subjects with a history of smoking compared to those without such a history, and this difference was statistically significant. These results also showed that the difference between the mean levels of AP among subjects with different levels of income is not statistically significant. This finding was inconsistent with the Ahmadi & Gholamaliabiz study (2004).

Another finding of the study showed that there was a significant relation between OS and age group, marital status, education level plus years of working experience of employees. As the age group of employees increased, the percentage of subjects without OS and even those with low OS diminished. However, as the age group of employees increased, so did the number of subjects with moderate OS. At all levels of OS, the level of OS in married employees was 4 times higher than that of single people. Also, at low or medium OS levels, the level of OS in employees with a bachelor's degree or higher was far higher than among subjects with an associate or lower education degrees. Among the employees without OS, the majority of subjects had less than 5 years of working experience. However, at low or moderate OS levels, the majority of employees had 10–15 years of work experience, while, in the group of subjects with moderate OS, employees with more than 15 years of work experience were in the second category of the OS level. On the other hand, the results showed that there was no statistically significant relationship between OS levels and gender, job category, monthly income, working hours as well as history of smoking in employees.

The results showed that there was a strong and significant relationship between OS and the level of AP (active and passive) in the staff of Farabi Hospital in Kermanshah. Here, with increasing OS, the degree of AP also grew in the individual. This finding is in line with Rasouli's study (2015), who showed that there was a significant relationship between AP and OS. Elsewhere, Hasssanbeigi et al. (2013) concluded that the level of stress was higher in addicted individuals two years before the onset of addiction than normal subjects. Sinha (2008) showed that high levels of stress and chronic stress are both risk factors for addiction. This was consistent with the study of Patwary et al. (2013), who found that at least half of the individuals use illicit drugs to reduce stress. Explaining this finding, it can be stated that stress, in the form of OS, demands a significant level of energy from employees in psychological and physiological dimensions. According to the compensatory imbalance stress model, the pressures exerted on individuals by their personal duties and responsibilities create emotional, cognitive, and behavioral imbalances in them. If stress persists, this imbalance weakens the individual's sense of vitality and energy, making them more prone to experiencing fatigue and burnout, leading to negative behavioral events. Among the possible responses to OS are behavioral responses, where substance use is one of the items found in the category of self-harming behaviors. Individuals who feel highly stressed and find themselves incapable and inefficient easily fail to cope with their mental problems, and turn to alcohol and drugs to achieve better relaxation and feeling. Thus, OS is a risk factor for health and substance use in employees worldwide (Bereyhe-Bereyhi, 2016).

There are various hypotheses about the etiology of AP and different factors are involved in its development, but none of them alone can explain the use of drugs. In the workplace, there are several features involved in the occurrence and prevalence of substance use, the most important of which is OS. Many other studies have also reported that OS, especially when combined with dysfunctional coping strategies, can increase AP (Bereyhe-Bereyhi, 2016). That is because one of the most important areas of health development in communities is the health sector, which is directly related to human health. Meanwhile, the staff working in hospitals is considered as a stressed occupational group (Linden et al., 1996).

The results indicated that OS could explain more than half of the variance of AP (active and passive). This finding confirmed the direct positive effect of OS on AP in the study by Bereyhe-Bereyhi (2016). This means that as stress in the workplace increases, so does employees' AP. This is in line with the study of Rasouli (2015), who showed that there was a significant relationship between AP and OS. Explaining this finding, it can be stated that it is the characteristics of the workplace and stressful conditions that can encourage substance use, and that working in inappropriate and stressful conditions can increase the tendency to use (Bereyhe-Bereyhi, 2016).

Research limitations here included the use of self-report tools that may have affected the answers to questions and led to bias. Also, the present sample only included the

staff of Farabi Hospital in Kermanshah, so caution should be taken in generalizing the findings to the staff of other psychiatric hospitals and other geographical areas. It is suggested that the present study is conducted in other organizations as well.

Conclusion

The results of the present study revealed that there is a relationship between OS and AP. With a beta coefficient of 0.73, OS is a predictor for AP. Thus, the effective factors in OS should be identified and targeted interventions should be performed to reduce it among psychiatric hospital staff.

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References

Ahmadi, H., & Gholamaliabiz, M. A. (2004). Study on the effects of socio-economics factors on addiction: Peerbanan camp 's addicts as a case study. *Etiadpajohi*, *2*(5), 81–102. URL: http://etiadpajohi.ir/article-1-467-en.html

Bereyhe-Bereyhi, H. (2016). *Designing and testing a model of some precedents of addiction potential in employees of Aghajari Oil & Gas Production Company* [Master's Thesis Industrial and organizational psychology]. Faculty of Education and Psychology, University of Shahid Chamran of Ahvaz.

Clark, D., & Sayette, M. (1993). Anxiety and the development of alcoholism. *American Journal on Addictions*, *2*(1), 59–76. https://doi.org/10.3109/10550499309115943

Frone, M. R. (2008). Are work stressors related to employee substance use? The importance of temporal context in assessments of alcohol and illicit drug use. *Journal of Applied Psychology*, *93*(1), 199–206. https://doi.org/10.1037/0021-9010.93.1.199

Hasssanbeigi, A., Askari, J., Hassanbeigi, D., & Pourmomahed, Z. (2013). The relationship between stress and addiction. *Procedia-Social Behavioral Science*, *84*(7) , 1333–1340. https://doi.org/10.1016/j.sbspro.2013.06.752

Jahanbakhsh Ganjeh, S., & Oreyzi, H. (2012). The relationship of job demands, job control with job stress, positive affect and negative affect among employees. *Research in Cognitive and Behavioral Sciences*, *2*(2), 75–90. https://www.sid.ir/en/Journal/ViewPaper.aspx?ID=320607

Khantzian, E. J., & Albanese, M. J. (2008). *Understanding addiction as self medication: Finding hope behind the pain*. Rowman Littlefield.

Linden, M., Maier, W., Achberger, M., & Herr, R. (1996). Psychiatric diseases and their treatment in general practice in Germany, results of a world organization study. *Nervenarzt*, *67*(3), 2050–2150. https://pubmed.ncbi.nlm.nih.gov/8901278/

Margolis, B. K., & Kroes, W. H. (1974). Occupational stress and strain. In A. McLean (Ed.), *Occupational stress*. Charles C Thomas. 373–391.

Milgrom, J., & Burrow, G. D. (2001). *Psychology and psychiatry: Integrating medical practice* (1st ed.). Wiley.

Patwary, M. A., Uddin, L. Q., Miah, M. A. J., & Sarker, M. H. (2013). Occupational stress and addiction: Possible neurobiological elucidation of medical waste related individuals. *Journal of Hospital Administration*, *2*(2), 71–88. https://doi.org/10.5430/jha.v2n2p71

Ras, R. (2002). *Job stress, Khajehpour*. Industrial Management Institute translated byKhajehpour G.Publications.

Rasouli, A. (2015). Investigating the relationship between addiction readiness, aggression self-efficacy, depression and stress in male and female students of Islamic Azad University, Mahabad Branch. *Journal of Educational Research*, *10*(44), 65–78. http://edu.bojnourdiau.ac.ir/article_523978.html?lang=en

Sinha, R. (2008). Chronic stress, drug use, and vulnerability to addiction. *NIH PA Author Manuscript*, *1141*(1), 105–130. https://doi.org/10.1196/annals.1441.030

Swendsen, J. D., Tennen, H., Carney, M. A., Affleck, G., Willard, A., & Hromi, A. (2000). Mood and alcohol consumption: An experience sampling test of the self-medication hypothesis. *Journal of Abnormal Psychology*, *109*(2), 198–204. https://doi.org/10.1037/0021-843X.109.2.198

Taheri Nakhost, H. R. (2011). *Primary prevention of addiction with a focus on the workplace*. Iranian Drug Control Headquarter.

Weed, N., Butcher, N. J., Mckenna, T., & Ben-Porath, Y. (1992). New measures for assessing alcohol and other drug problems with MMPI-2, APS & AAS. *Journal of Personality Assessment*, *58*(2), 389–414. https://doi.org/10.1207/s15327752jpa5802_15

Zargar, Y., Najarian, B., & Naami, A. Z. (2007). Investigating the relationship between personality traits, religious attitude and marital satisfaction with addiction potential in the employees of an industrial company in Ahvaz. *Journal of Educational Sciences and Psychology, Shahid Chamran University of Ahvaz*, *3*(1), 99–120.