

Investigation of Occupational Stress and its Relationship with the Demographic Characteristics of Workers in Ilam, Iran

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Background: Workers are more susceptible to stress disorder for several reasons. The aim of this study was to investigate occupational stress among workers and other personnel at the ZardjinBaft Workshop in Ilam, Iran, and to examine the relationship between occupational stress and several parameters, such as age, gender, marital status, educational level, work experience, tobacco use, body mass index (BMI), and the type of work.

Method: This was a descriptive, cross-sectional study that was performed in June 2010. The sample population that was studied consisted of all of the workers and other personnel (130 people) at ZardjinBaft Workshop in Ilam, Iran. They were studied using Cooper's standard questionnaire for stress in the work environment, and we examined the relationship between stress, as the dependent variable, and the eight independent variables mentioned in the Abstract.

Results: In the sample population that was studied, severe stress was not observed in most of the sections of the workshop. In addition, using the analysis of variance test (ANOVA), no significant relationship was observed between the average degree of stress and the average demographic characteristics. However, the average stress level had significant relationships with the level of education, work experience, and the type of work, suggesting that stress increases as the level of education increases. In addition, in the beginning and early years of employment, medium levels of stress were observed, and the prevalence of stress decreased after the first 10 years of employment. In addition, workers in the ventilation section of the factory had the highest stress levels. The fear of losing their jobs was the main factor that caused stress among the workers at ZardjinBaft Workshop in Ilam.

Conclusion: We suggest that managers consider the high importance of stress in the work environment. They should be able to recognize when workers are stressed and offer them assistance and training. They also can eliminate the factors that cause stress in the work environment by taking preventive action. In parallel, workers should try to interact well with their managers and talk to her or him about the conditions of their jobs.

Keywords: Stress; Workers; ZardjinBaft

Additional Information for citing this article:

Title of Journal: Electronic physician; Abbreviated title of journal: Electron. Physician

doi: 10.14661/2013.611-615

Editorial information:

Type of article: Original

Published: February.01.2013

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1. Introduction

In most present societies, human life, in terms of the environment and lifestyle, has changed drastically in comparison with past years. At the present time, social sources of stress have become common more than ever before in most countries of the world, and this is especially true in industrial societies and in societies in which the social and economic chaos have disrupted normal life (1). In fact, stress is a complex collection of responses, and emotional, intellectual, and psychological reflexes. In addition, stress is an energy-releasing phenomenon that triggers many body organs and systems, causing systematic stimulation of the human body (2, 3). There is no doubt that the stress arising from the work may result in physiological consequences (e.g., cardiovascular diseases, skeletal-muscular diseases, and digestive system diseases), psychological consequences (e.g., post-trauma syndrome and occupational fatigue), and behavioral consequences (absence from work, sleep disorders, and smoking). Therefore, stress imposes adverse consequences on people and exorbitant expenditures on organizations (4).

Stress is known as the hidden disease that can affect organizations and their employees, so it should not be ignored and considered to be unimportant (2, 4-6). This disease is often referred to as the "century's plague," which has brought pressure into the lives of millions of people and has severely impaired their physical and mental health and their abilities (1, 2, 7, and 8). Based on the above issues, it seems that a factor, named stress, is the cause of the progression of many debilitating circumstances. Medium levels of stress make employees maximize their performance, but, sometimes, when stress becomes more severe, employees enter the risk zone in which they are caught by strange perceptions and beliefs. In this situation, persons may become psychologically anxious, muddled, sensitive, illogical, and indifferent, and these conditions, induced by stress, may result in their quitting their jobs (1, 2, 5, and 7). Since stress is evident in some jobs, identification of the factors that cause the stress will be an effective step towards the prevention and reduction of stress and, perhaps, the development of a cure for it. Demographic variables, including age, gender and marital status, level of education, work experience, tobacco use, and BMI seem to impact occupational stress. The aim of this study was to determine the relationship between occupational stress and demographic characteristics of workers in the ZardjinBaft workshop in Ilam. The objective of this study is to identify ways that can help decrease occupational stress.

2. Material and Methods

This study was a descriptive project conducted among workers in ZardjinBaft workshop in Ilam (one of the cities in Iran's west region). In this research, the sample population that was studied consisted of 130 workers with different age groups. The age range in the majority of the units was 24-54, and 88.9% were male, 71.5% were married, and the subjects worked in different sections of the factory. In this study, a survey was used to collect data, such that the people in different units and different work shifts of the factory were met during one week, and questionnaires were provided to the participants. It is worth mentioning that the study included only the workers who were present at work when the researcher was there. In order to investigate the relationship between stress and the demographic characteristics of the workers, a form was prepared to record the general characteristics of the workers, such as age, gender, educational level, marital status, work experience, BMI, tobacco use, and type of work (job).

In the next stage, Cooper's questionnaire of stress in the job environment and intense work conditions was prepared. This questionnaire, as a screening tool, is one of the most commonly used means for measuring the degree of stress in a job environment, and its reliability has been proven in previous studies (9). It is used extensively as a measure for job stress in most countries, and it consists of 32 questions that examine the presence of signs of job stress. Four levels of stress were considered for each group. The participants chose answers that were closest to their own experience during the last month among the four choices. Each question had four possible answers, i.e., never, sometimes, often, and always. For each choice, the lowest score was 0, and the highest score was 3. Total scores that were equal to or less than 39 were assigned low stress; scores ranging from 40 to 62 were assigned a medium level of stress; scores equal to or greater than 63 were assigned a high level of stress. The data that were collected were categorized and summarized using descriptive indices and SPSS software, and, then, the hypotheses of the research were examined.

3. Results

Table 1 provides selected demographic information and the average level of stress by independent variables in the studied group. According to the findings, demographic characteristics, such as age, gender, marital status, educational level, work experience, tobacco use, body mass index (BMI), and the type of work (job) were investigated. Results were prepared each of them separately, and the relationship of each one with the prevalence of stress was examined.

Table 1. Average level of stress by independent variables in the studied group

Variable	Grouping	Frequency (%)	Variable' Mean±SD	P value
Age (year)	20-30 years	48(36.9)	32.89±1.16	0.08
	31-40 years	70(53.8)	31.94±0.84	
	>40 years	12(2.3)	27.42±2.58	
Sex	Female	8(11.1)	28±7.5	0.16
	Male	64(88.9)	63.28±13.08	
Marital status	Single	37(28.5)	32.19±8.03	0.8
	Married	93(71.5)	31.8±7.6	
Level of education	Below Diploma	25(19.23)	19.2±9.33	0.04
	Diploma	97(74.61)	74.6±7	
	diploma with distinction	7(5.39)	5.4±8.2	
	Bachelor	1(0.77)	0.8±0	
Work Experience (year)	<5 years	51(39.23)	39.2±7.25	<0.001
	5-10 years	69(53.08)	53.1±7.2	
	> 10 years	10(7.69)	7.7±8.2	
Tobacco consume	Yes	16(12.3)	34.75±6.8	0.75
	No	114(87.7)	31.51±77.7	
BMI	< 19	1(0.78)	39±0	0.58
	19-23	18(13.95)	32.63±9.61	
	>23	110(85.27)	31.72±7.38	
Type of work (Job)	Laboratory	3(3.2)	36±4.6	.007
	Administrative	7(5.4)	26/86±5.64	
	Storehouse	6(4.6)	28/5±5.9	
	Enforcement	14(10.8)	29/43±9.37	
	Knitting	47(36.2)	33/27±6.81	
	Health and Safety	1(0.8)	20±0	
	Efficiency	2(1.5)	20±2.82	
	Installations	5(3.8)	37±3.91	
	Construction	1(0.8)	21±0	
	Refinery	3(2.3)	35±4	
	control	7(5.4)	32±7.62	
	Chelle screw	5(3.80)	29.2(10.84)	
	Indigo	15(11.5)	31.13(6.16)	
	Finish	4(3.1)	35(11.23)	
Supplies	1(0.8)	22±0		
Ventilation	4(3.1)	41.75±2.5		

According to the findings of this study, the age range in units was 24-54, and the largest group was the one for ages 31-40 (53.8% of participants). Males made up 93.8% of the workers who participated. In addition, 71.5% of workers were married, and 75.6% of the workers had earned a high school diploma. The range of previous years of employment in 53.1% of the units was less than five years. Almost 87.7% of units of under study workshop did not have workers with tobacco consume. In addition, based on the results of the study, body mass index (BMI) was greater than 23 in 84.6% of the units of the workshop, and 36.2% of the workers were worked in the weaving unit of the factory. The results showed that the workers of 80.8% of units have experienced slight and level of stress and the workers of 19.2% of units have experienced medium level of stress. It is worth mentioning that none of the workers of the units experienced severe levels of stress. Among the factors of occupational stress, educational level (average and standard deviation of $P=37.29\pm 8.18$), work experience (average and standard deviation of $P=35.18\pm 7.25$), and type of work (average and standard deviation of $P=41.75\pm 2.5$) had the highest scores of occupational stress. Furthermore, using the analysis of variance statistical test (ANOVA), a significant positive correlation was recognized between the scores of these three variables and the total stress score ($P_1=0.048$) ($P_2=0$) ($P_3=0.007$).

According to Table 1, in order to investigate the difference in the average degree of stress in the studied age groups using the Analysis of Variance statistical test, it was observed that there was no significant difference in the average degree of stress among different age groups. In other words, the average degree of stress can be considered equal in all groups, although apparently there seems to be some differences in the average degree of stress among different age groups. According to Table 1, there was no significant difference in the degree of stress between the two genders. There was no significant difference in the degree of stress by marital status. In other words, the average degree of stress can be considered the same in single and married people. According to Table 1, there is a significant difference in the degree of stress by educational level. There was a significant difference in the degree of stress by work experience. The results showed that there is no significant difference in the degree of stress by tobacco use. According to Table 1, there was no significant difference in the degree of stress by BMI. The results showed that there was a significant difference in the degree of stress by the type of job. The analysis of variance statistical test was used to examine the difference in the average degree of stress by demographic characteristics, and we observed that there was no significant difference.

4. Discussion

Stress increased as educational level increased. This was probably due to the fact that people who had higher levels of education had the same job ranks and salaries as of those who had lower degrees of education. According to a study concerning occupational stress and dissatisfaction among women employed in Ahwaz, it was observed that occupational stress was more prevalent among women with higher degree of education. This is consistent with the results of our study. Simin Zare said in this regard that the first and the most important reason is the difference in salaries. Women often see that in the work environment, they get lower wages than men with the same level of education (10). Regarding the work experience, it was observed that in the beginning of employment and before the first 5-10 years, the degree of stress increases with time, and after 10 years of employment, a decreasing trend occurs with time. In Morgan's Occupational Stress (11), some points consistent with the results of this study were mentioned. Most likely, upon entering a new work environment and accepting responsibilities, people react to the environment and its stress-causing factors, until there is time to adapt. The most prevalent reaction of people to the new conditions is conducive to stress and tension. However, after adaptation, he/she tries to eliminate the stress-causing factors and, consequently, the degree of stress is reduced (12).

Regarding the type of work, as mentioned in Randall Ross' and Elizabeth Altmaier's, 'Intervention in Occupational Stress'(7), job characteristics are among the other factors that may cause occupational stress. Results obtained in previous studies have shown that certain aspects of the work environment cause stress. These characteristics can be grouped into four different categories, i.e., rate of the work, repetitiveness of the work, work shift, and characteristics related to the duty (2). Managers can both reduce the stresses of the work environment and obtain higher efficiency of the activities of their companies when they respect their employees' work and their desires to a greater extent and give them a feeling of security and motivation. When that happens, the employees will perform better and interact with their fellow employees better. In addition, by doing this, managers also can reduce the incidence of diseases that cause workers to be absent from the work environment as well as reduce damages and injuries that occur during work.

5. Conclusion

With respect to the information obtained, we suggest that managers consider the high importance of stress in the work environment. They should recognize the stressed workers and train them. They can also eliminate stress-causing factors from the work environment through preventive action. In parallel, workers should try to interact well with their managers and talk to her or him about the conditions of their job. Improvement of social skills in the work environment is another technique for reducing occupational stresses.

Acknowledgements

Authors are grateful to the organizers of ZardjinBaft workshop and the Research Department of Ilam University of Medical Sciences for their support. The article is prepared based on the scientific writing guide (13, 14).

Conflict of Interest:

There is no conflict of interest to be declared.

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