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Assessment of Job Burnout Rate in Family Physicians of IUMS in 2018

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Abstract: *Introduction: Job burnout is a form of physical, emotional and mental fatigue due to continuous and repeated emotional stress caused by a prolonged exposure. we can use equations such as stress, fatigue, indifference, exhaustion, and erosion. Material & Methods:48 family physicians working in Iran University of Medical Sciences completed the Maslach job burnout questionnaire, personal information. Results: Our subjects were emotional exhaustion in the high level, and in depersonalization in the medium range and in the Personal accomplishment, they were low level. The mean and standard deviation of total burnout score was 63.00 ± 2.26. There was a significant relationship between job burnout and number of children, covered population, number of clients, amount of salary received, marriage and timely payment. There was reversal correlation between job burnout, number of children, covered population and workplace distance from lodging. There was significant direct correlation between emotional exhaustion and amount of salary and working hours. There is significant direct relationship between depersonalization and work experience. Also, the relationship between this dimension and sex and marriage was significant. There was a significant reversal relationship between personal accomplishment, salary and working hours. Conclusion: It is necessary to predict and apply appropriate intervention. Also, reducing family physicians' hours of work to prevent burnout can be used. In addition, It is recommended to conduct similar studies on a wider scale.*

Keywords: *Jobburnout,Family physician,Questionnaire,Maslach, Emotional exhaustion, Depersonalization, Personal accomplishment.*

INTRODUCTION

There is stress in the life of all those who have a job, and in numerous ways affects them. Job stress has a direct impact on the occurrence of psychological problems. Nervous pressure in the organization acts as a pest that undermines the forces and sterilizes the activities and efforts so that the annually huge capital is lost due to the lack of employees' physical and mental health, their efficiency reduction, turnover and change jobs due to job stress (Kermani, Heshmati and Azimi Rad, 2011).

The results of some researches indicate that there is a positive relationship between the work-related psychological stresses components and tendency to **turnover** (Wai and Robinson, 1998).

The subject of staff depreciation or burnout, currently, is a common problem in service industries, so that, according to available data, out of seven workers or employees at the end of the day, one person will be depreciated. Since staff burnout leads to productivity reduction, increased absenteeism, increased health and personnel relocation costs, physical and behavioral changes, and reduced quality of services offered to clients, followed by dissatisfaction with the services, and more importantly, it affects customers or clients; therefore, recognizing and preventing burnout will play a critical role in promoting people's mental health and improving the quality of offered services.

Occupational burnout is introduced as one of the harmful components to the family physicians' health. So, the aim of the current study was to determine the occupational burnout status of rural family physicians affiliated to Iran University of Medical Sciences.

Lack of attention to this group leads to exerting stress and tension on them, and if these stresses grow and become chronic, burnout is caused gradually. A person who is affected by this syndrome loses his/her efficiency, energy, and sense of responsibility in the working environment and this disorder leads to the loss and reduction of the quantity and quality of health care. Due to the costs associated with burnout syndrome, it is necessary to expand the scope of studies related to this issue and with further study, we must try to provide a favorable career environment for family physicians so that with better morale and vitality, motivation and attachment to their jobs, provide creative, active, educated and informed about their job individuals to the community.

Studies were done on 12 European countries that revealed emotional exhaustion as 43%, depersonalization 35%, and a lack of personal accomplishment 32% (Soler et al., 2008).

In a study conducted in Canada, in more than half of the examined doctors, the researchers noticed emotional exhaustion and depersonalization (Lee et al., 2008).

Another study was conducted on Khorasan family physicians that disclosed a reverse correlation between standard work environment indices with emotional exhaustion and depersonalization and direct correlation with personal accomplishment (Mehdizadeh et al., 2013).

The concept of occupational burnout

Occupational burnout, when he observed signs of fatigue in his staff, was first defined by Freudenberger in the 1970s. He called this phenomenon a mental-physical forces depreciation syndrome, which is created in people working in helping occupations who spend a lot of hours working in close contact with other people. So, it can be claimed that burnout is a form of physical, emotional and mental fatigue due to incessant and repeated emotional stress caused by long and prolonged contact with clients (Rezaian, 2005).

Pines and Orsonson (1981) consider occupational burnout as one of the most significant inevitable outcomes of occupational stress, which will endure as long as the stress is not eliminated. The result of burnout is the loss of motivation, desire, energy, and loss of performance in life.

The theories related to depression

Maslach et al. (2001) consider that burnout has three main components:

- **Emotional exhaustion**

The key factor is burnout and the most obvious degree is burnout symptoms. This dimension of burnout implies a fundamental response to stress. In fact, emotional exhaustion is a needed dimension for defining burnout and without this concept, burnout is incomplete. Emotional fatigue is, in fact, the presence of feelings in which a person has lost his/her emotional forces and is not able to establish emotional relationships with others (Maslach, 2001).

- **Depersonalization**

Marauder (2002), in a review of a number of burnout studies, believes that after emotional exhaustion, depersonalization usually occurs and, in fact, it is a direct response to occupational stress. In other words, depersonalization refers to unemotional, irrelevant, and fierce responses to clients (service recipients) and colleagues, and negative emotions and attitudes along with blaming others.

- **Personal accomplishment**

The relationship between individual inefficiency with two other dimensions of burnout is somewhat complicated. In some studies, it seems that the individual inefficiency dimension is the result of another two dimensions of burnout, but in other cases, this hypothesis has not been confirmed and it has been emphasized that these components, rather than being in serial fashion, are parallel and they develop together.

Method

This study was a descriptive cross-sectional study.

Sampling was carried out by the census method and the research sample consisted of all family physicians working in Iran University of Medical Sciences with 6 months working experience as a family physician (n=48).

The data collection tool was the Maslach Burnout Inventory (MBI), along with the data collection form. This test was made by Maslach (1981), which is based on a new estimate of the stress, i.e., burnout. This inventory consisted of 22 items that have been used to measure emotional exhaustion, depersonalization and lack of personal fulfillment in the framework of professional activities, and especially they have been used to measure and prevent burnout in professional groups such as nurses and teachers, etc. Scoring was done based on a 7-degree scale. When the participants were studying this scale, they could express their feelings with respect to the options available.

The items (1, 2, 3, 6, 8, 13, 14, 16, and 20) were related to the emotional exhaustion subscale. The items (5, 10, 11, 15, and 22) were related to the subscale of depersonalization, and the items (4, 7, 9, 12, 17, 18, 19, and 21) were also related to the lack of individual success subscale. The score of questions is from 0 to 6.

Emotional exhaustion is divided into three severe (>27), moderate (17-26), and mild (<16) groups.

Depersonalization is divided into three groups of severe (>13), moderate (7-12), and mild (<6).

Personal accomplishment is divided into three groups of severe (<31), moderate (32-38), and mild (≥39).

Validity and reliability of the inventory in Iran have been confirmed based on the various studies. This inventory has been investigated in terms of factor validity by Akbari et al. (Akbari, Kiany and Eghtesadi, 2011).

After collecting the questionnaire, *IBM SPSS Statistics v25.0 IF003 x64* software was used to analyze the extracted data.

The Kolmogorov-Smirnov test was used to test the normality of the distribution of quantitative variables (with the aim of using parametric or nonparametric statistical tests).

In order to determine the relationship between qualitative variables such as gender, marital status and timely payment, parametric analyzes such as T-test and ANOVA and non-parametric analyzes such as Mann-Whitney and Kruskal-Wallis tests were used to compare the mean score of burnout in the subgroups of qualitative variables.

The total burnout score was obtained from the sum of the first two components and the reverse score of the third component.

Findings

The mean of participants' age was 37.31 ± 2.42.About 18.8% (9) of the participants were male and 81.2% (39) were female that thirty participants were younger than 40 years old and 18 were 40 years and older. Three participants were single, three were divorced and 42 were married. The work experience mean score was 6.75

± 4.39 years. Twenty four participants did not have children, 18 participants had 1 child and 6 participants had 2 children. The mean distance from home to work was 39.38 ± 23.96 km. The mean covered population was 7630±4555 people. The mean daily visits rate was about 35 people that the highest frequency in the number of visits per day was 30 people. According to the contract, the mean working hours of all physicians were 7 to 8 hours a day. The salary varied from 3,200 thousand Tomans to 9 million Tomans, and salary mean was 6.900-1.590 thousand Tomans. Seventy-five percent of the doctors indicated that payments were timely.

Explanation of dependent variable (burnout)

Table 1 designates the mean and standard deviation, and the dominant range of scores in the questionnaire in line with burnout and its three dimensions.

Table 1: Main variables

Dimensions of burnout	Scores range	Max.	Min.	Mean	Standard deviation
Emotional exhaustion	0-54	48	9	31.50	11.71
Depersonalization	0-30	20	0	7.50	5.86
Personal accomplishment	0-48	31.50	7.50	26.25	8.37

Table 2 offers a description of the frequency of individuals in the various ranges of three dimensions of burnout.

Table 2: The frequency of burnout dimensions

Dimensions of burnout	Frequency	%
Emotional exhaustion		
Mild (≤16)	12	25
Medium (17-26)	3	6.2
Severe (≥27)	33	68.8
Total	48	100
Depersonalization		
Mild (≤6)	21	43.8
Medium (7-12)	18	37.5
Severe (≥13)	9	18.8
Total	48	100
Personal accomplishment		
Mild (≥39)	0	0
Medium (32-38)	6	12.5
Severe (≤31)	42	87.5
Total	48	100

Due to the lack of alignment between personal accomplishment and two other dimensions, to calculate the total score of job burnout, response scoring was reversed and they were used to calculate the total score.

The mean scores in various dimensions of job burnout in our study were as follows:

- ✓ In the emotional exhaustion dimension the mean is 31.50±11.71
- ✓ In the depersonalization dimension the mean is 7.50±5.86
- ✓ In the personal accomplishment dimension the mean is 37.8 ± 25.26

The participants in the emotional exhaustion dimension were in the severe and in the depersonalization dimension they were in the medium, and in the personal accomplishment dimension, the participants were in the mild range, which indicated the severity of lack of personal accomplishment. The mean and standard deviation of total burnout score was 63.00 ± 2.26.

Table 3: Pearson / Spearman correlation coefficient between burnout score and quantitative variables

Variable	Burnout score	
	P-value	Correlation coefficient
Age	0.83	0.03
Work experience	0.65	-0.06
Number of children	0.04	-0.29
Population covered	0.03	-0.31
Distance from home to work	0.24	-0.17
Number of visitors	0.06	-0.27
Salary	0.03	0.32
Working hours	0.053	0.28

As it is evident, there is a meaningful relationship between the number of children, the covered population and salary with burnout; this relationship is reversed in line with the first case and with regard to salary it is straightforward so that by increasing salary, the mean score of burnout has been increased.
Table 4 demonstrates the relationship among job burnout and the studied qualitative variables.

Table 4: Relationship between job burnout and qualitative variables

Variable		Count	Burnout score		*P-value*
			Mean	Standard deviation	
Gender	Female	39	60.81	21.54	0.24
	Male	9	72.5	25.79	
Marital status	Married	42	59.78	21.45	0.008
	Non-married (single and divorced)	6	85.5	18.07	
Timely payment	Yes	36	59.12	18.45	0.053
	No	12	74.62	29.98	

Based on the findings presented in the tables above, there is a significant relationship between marriage and burnout, and burnout is higher among single participants.

Findings Related to secondary objectives

The relationship between burnout dimensions and quantitative variables

Table 5: Relationship among burnout dimensions with quantitative variables

Quantitative variables	Emotional exhaustion		Depersonalization		Personal accomplishment	
	P-value	Correlation Coefficient	P-value	Correlation Coefficient	P-value	Correlation Coefficient
Age	0.55	0.09	0.44	-0.11	0.31	-0.15
Work experience	0.19	-0.19	0.04	0.23	0.61	-0.07
Number of children	0.12	-0.24	0.40	-0.12	0.20	0.19
Covered population	0.06	-0.27	0.24	-0.17	0.19	0.19
Distance from home to work	0.17	-0.20	0.12	-0.22	0.58	-0.08
Number of students	0.31	-0.31	0.20	-0.19	0.81	0.03
Salary	0.02	0.32	0.31	0.15	0.01	-0.36
Working hours	0.01	0.36	0.34	-0.14	0.001>	-0.39

- There was a significant relationship between emotional exhaustion and salary and working hours.
- There was a significant relationship between depersonalization and work experience.
- There was a meaningful relationship between personal accomplishment, salary and working hours.

The relationship between the burnout dimensions and qualitative variables

Table 6: Relationship between dimensions of job burnout and gender

Burnout dimensions	Severity by score	Gender		P-value
		Female	Man	
Emotional exhaustion	Mild	9	3	0.82
	Medium	3	0	
	Severe	27	6	
Depersonalization	Mild	21	0	0.001>
	Medium	15	3	
	Severe	3	6	
Personal accomplishment	Mild	0	0	0.026
	Medium	6	0	
	Severe	33	9	

There is a meaningful relationship between depersonalization and gender.

Table 7: Relationship between burnout dimensions and marital status

Burnout dimensions	Severity by score	Marital status		P-value
		Married	Non-married	
Emotional exhaustion	Mild	12	0	0.21
	Medium	3	0	
	Severe	27	6	
Depersonalization	Mild	18	3	0.04
	Medium	18	0	
	Severe	6	3	
Personal accomplishment	Mild	0	0	0.32
	Medium	6	0	
	Severe	36	6	

There is a meaningful relationship between depersonalization and marital status (married).

Table 8: Relationship between the dimensions of job diligence and timely payment of salaries

Burnout dimensions	Severity by score	Timely payment		P-value
		Yes	No	
Emotional exhaustion	Mild	9	3	0.58
	Medium	3	0	
	Severe	24	9	
Depersonalization	Mild	15	6	0.56
	Medium	15	3	
	Severe	6	3	
Personal accomplishment	Mild	0	0	0.31
	Medium	6	0	
	Severe	30	12	

Timely payment of salaries does not have a meaningful relationship with any of burnout dimensions.

- **Determining the correlation between the covered population, the number of daily visited patients and the income variables:**

Based on the Kolmogorov-Smirnov test, variables such as age, work experience, and income had a normal distribution.
In order to investigate the correlation between these three variables, the researchers used the Spearman correlation coefficient.

- **Correlation between the components of the questionnaire and the total score:**

All of the correlations are meaningful.
The strongest correlation is between total score and emotional exhaustion.
The relationship between personal accomplishment and the other variables is reverse (As expected).

Summary of findings

As it was mentioned, the participants in the emotional exhaustion dimension were in severe range, in the depersonalization diminution they were in the medium range, and in the personal accomplishment dimension, they had a low personal accomplishment that means lack of personal accomplishment. The mean and standard deviation of total burnout score was 63.00 ± 2.26.
There was a significant relationship between job burnout and number of children, covered population, number of clients, salary, marriage and timely payment.
There was a reverse correlation between burnout, work experience, number of children, covered population and distance between work and home.
There was a significant and direct correlation between emotional exhaustion and salary and working hours.
There was a meaningful and direct relationship between the depersonalization and the work experience. Similarly, the relationship among this dimension and gender and marriage was also significant so that the severe and moderate cases were higher in males and non-married participants.
There was a meaningful and reverse relationship between personal accomplishment, salary and working hours.

Discussion and Conclusion

The score of each case of emotional exhaustion, depersonalization, and personal accomplishment in Isfahan's family physicians was low in 2016 and in the emotional exhaustion, depersonalization, and personal accomplishment dimensions there was no significant difference between women and men and single and married participants and there was a direct relationship with the total burnout score and lack of personal accomplishment score (Moein, Ahmadzadeh and Safaeeyan, 2018). Contrary to these results, the current study revealed high scores for emotional exhaustion and lack of personal accomplishment, and in terms of depersonalization there was a significant difference between men and women, and the total score of job burnout and depersonalization was lower in the current study. Working experience in the current study has a meaningful relationship with the depersonalization dimension. These differences are probably due to cultural and geographical differences, such as the long distance from the studied physicians' home to work compared to doctors in Isfahan.
In the studies conducted by Dr. Mehdizadeh in Khorasan in 2013, emotional exhaustion had a significant relationship with gender. Though, depersonalization and personal accomplishment did not have a meaningful relationship with gender. But, in our study, there was a significant correlation between depersonalization and gender in our research and in Dr. Mehdizadeh's study,there was a significant relationship between age and personal accomplishment. But there was no significant relationship between emotional exhaustion and depersonalization. In our study, age relationship with any dimension of burnout was not significant.
The marital status, the number of children and the distance from home to work and work experience did not have a significant relationship with the dimensions of occupational burnout. While in our study there was a significant relationship between marital status and burnout and depersonalization, there was a significant

relationship with the higher number of children with burnout. The distance from home to work did not have any meaningful relationship with none of the dimensions of burnout. But the work experience had a direct and significant relationship with personal accomplishment in the current study.

In Dr. Mehdizadeh's study in Khorasan, exhaustion was moderate in the dimensions of personal accomplishment and personal accomplishment of personality and in the emotional exhaustion dimension it was high. Nonetheless, in the current study, emotional exhaustion and personal accomplishment had the higher disorder.

The study in 2018 on Irish doctors disclosed that lower age and male gender have a higher risk of burnout (O'Dea et al., 2017). These results about age and gender were not consistent with our study; this difference perhaps was probably due to the small sample size.

A systematic review in 2017 on doctors in Rawalpindi - Islamabad considered the gender and status of marriage and workload (number of visits) as the causes of job burnout. These results in line with the number of clients and the marital status were consistent with the current study (Azam, Khan and Alamo, 2017).

One of the limitations of this study is its cross-sectional nature. As Prosser et al. (1999) conducted; the longitudinal survey of job burnout can offer a more accurate assessment.

Another limitation was useing the data according to the participants self-reports. On the one hand, the best source could be the person him/herself. However, misunderstanding of questions can lead to unrealistic.

Another limitation was the low sample size.

Job burnout has many costs and outcomes for organizations and personnel, such as frequent job and working place replacements, absenteeism and many leaves, smoking and substance abuse, suicide risk, etc. which can have a negative impact on the quality of care for patients.

The high prevalence of burnout necessitates intervention in this case. These interventions may include training before starting to work and psychological preparation for the started or the selection of proper individuals for activities in the family doctor's program.

Though, in cases where there is a meaningful relationship between variables, to prove the cause and effect relationship longitudinal and controlled studies are needed.

With regard to the results of marital state and gender, it seems necessary to conduct qualitative studies to identify the main causes of these problems and based on the results, predict and apply appropriate interventions. Likewise, supplementary strategies such as reducing family physicians' working hours can be used to prevent burnout in all its dimensions. Furthermore, due to the limited number of participants in this study, it is recommended to carry out similar studies on a wider scale.

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