



Correlation between occupational burnout and personality dimensions among physicians working in hospitals of Rafsanjan University of Medical Sciences, Iran, 2016

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Abstract

Background: Occupational burnout is an emotional response to chronic occupational stress. The aim of this study was determine the rate of occupational burnout among physicians working in Rafsanjan University hospitals Rafsanjan, Iran, and its correlation with personality dimensions: 2016.

Materials and Methods: In this descriptive and correlational study, 161 physicians were recruited using the census method. After obtaining informed consent, respondents filled in the Revised NEO Personality Inventory (NEO PI-R) and Maslach Burnout Inventory. Data were analyzed using independent t-test, one-way analysis of variance (ANOVA), and multiple linear regression.

Results: Gender, age, and working experience did not have a significant association with occupational burnout ($P > 0.050$). Moreover, 16 (9.9%), 139 (86.3%), and 6 (3.7%) of the physicians had low, moderate, and high occupational burnout, respectively. The mean score of emotional fatigue of women ($P = 0.015$) and individuals aged 35-50 years ($P = 0.400$) was higher. The association of job burnout was significant and inverse with all dimensions of personality and significant with the personality dimension of neuroticism ($P < 0.001$). Regression analysis indicated that 23.8% of occupational burnout was predictable by the personality dimension of extroversion [$P = 0.021$].

Conclusions: Ninety percent of the physicians had moderate to severe occupational burnout that was related to some personality dimensions. Since doctors play an important role in promoting community health, it seems necessary that trustee organizations, while investigating the factors affecting occupational burnout and trying to improve the status quo, use personality assessment as part of the appointment and organization process.

Keywords: Occupational Burnout, Personality, Physician, Iran

Introduction

Motility and mobility are necessary for human life and mental stresses are useful for human mobility and effort; however, high rates of disturbing tensions diminish the efficiency of human resources, and hence, reduce the efficiency of the organization and weaken its foundations (1). Occupation is one of the most important sources of mental stress and the phenomenon of occupational burnout is one of the main occupational issues

usually seen as a response to occupational and organizational tensions among employees of different organizations (2).

Occupational burnout is a consequence of permanent and frequent occupational pressures. As a consequence, the individual feels stressful in his working environment due to internal and external factors, which, in case of continuation, eventually changes into a sense of burnout (3). The consequences of this phenomenon include individual issues like the incidence of some

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psychological disorders such as anxiety and depression (4), loss of organizational happiness (5), reduction of organizational commitment and job satisfaction, tendency to quit, and occupational stagnation (6), reduction of employee participation (7), organizational silence (8), deviant behavior (9), reduction of occupational creativity (10), and distance of the organization from its objectives and reduction of productivity (11).

Maslach considered occupational burnout as a psychological symptom that was a combination of emotional burnout, depersonalization, and lack of individual success (12). This multifactor phenomenon is influenced by various individual and environmental factors. Saatchi considered individual factors as the most important and most specific cause of occupational burnout, as he believed that the individuals themselves cause their own burnout because of ineffective performance (13). Personality is the most important individual factor which plays an important role in the occupational performance of individuals, because it specifies their motivation and attitude towards the job and the way in which the individuals respond to job requirements (14, 15). According to Cervone and Pervin, personality is a pattern of thinking, feeling, and behavior based on individual characteristics in conjunction with the hidden or apparent psychological mechanisms behind these patterns (16); therefore, the personality of each individual can explain the level of his/her occupational burnout. The high amount of workload resulting from the type of occupation gradually diminishes individuals' physical and mental capabilities and job satisfaction and may discourage them from engaging in their profession. All of these factors may result in occupational burnout. Some of these stresses are inevitable and professional requirements (17, 18).

The results of previous studies indicate that occupations which impact the health of individuals are considered as stressful occupations. This stress is higher among doctors due to sensitivity in decision making, long working hours, and judicial complaints (19). In health care organizations, occupational burnout is important because of the direct relationship with community health. Since such a study has not been conducted in the community of physicians working in Rafsanjan University of Medical Sciences, Rafsanjan, Iran, until today, and an estimate of occupational burnout is not available in this society in Rafsanjan, this study was performed with the aim to assess occupational burnout among physicians occupied in Rafsanjan University of Medical Sciences in 2016 and its association with personality dimensions.

Materials and Methods

The statistical population of this descriptive-correlational study included all doctors (specialist, and general doctors) employed in hospitals affiliated to Rafsanjan University of Medical Sciences in 2016 ($n = 161$) all of whom were included in the study (100% response rate).

The study inclusion criteria were employment at the time of conducting the study and work experience of more than 6 months. In addition, the exclusion criteria included a history of mental illness leading to hospitalization or drug treatment, a history of death of close relatives during the past 3 months, divorce during the past year, severe marital conflicts requiring psychological counseling, reluctance to participate in the study, and incomplete questionnaire.

The demographic characteristics checklist including questions on age, gender, and working experience, and the Revised NEO Personality Inventory (NEO PI-R), and Maslach Burnout Inventory (MBI) were exploited to collect data. In the first step, the license of the study was obtained, then, the names of all physicians were obtained from the staff department offices of the Ali-ibn Abi Talib, Moradi, and Nikanfs hospitals. In the next step, the researchers referred to the work place of the doctors and explained the purpose of the study to them. If the participants provided an informed consent, their emails were received. Using the Google Docs software, the questionnaires were designed electronically and the link of the loading site of the questionnaire was sent to the participants. After answering the questions, the participants returned the questionnaires to the sender (the plan executor). In this method, only the responses were displayed for the researcher and the sender remained unknown. Thus, the principle of confidentiality was observed in the research and the participants were also aware of this issue.

The NEO PI-R was prepared by McCrae and Costa with 181 items in 1985. After several revisions, its current version (NEO-PI-R) with 60 items is used (20). In Iran, Garrosi et al. translated this questionnaire into Persian, and then, investigated its functional structure. The 60 items of this questionnaire were scored based on a 5-point Likert scale ranging from 4 to 0 (completely agree, agree, no comment, disagree, and completely disagree, respectively). Each 12 items of the questionnaire examined one of the five major factors of personality (neuroticism, extroversion, flexibility, pleasure, and responsiveness). The range of score for each scale was 0-48. This questionnaire lacked a total score. A high score in any personality trait indicated the high intensity of that trait. NEO PI-R scales were of high validity and correlation between scales was high

(21). In a study by Mirzaie et al., the Cronbach's alpha coefficient of the factors of this questionnaire ranged from 0.680 to 0.881; moreover, the total Cronbach's alpha and the retest validity of the total score were 0.95 and 0.633, respectively (22). In the present study, Cronbach's alpha of the questionnaire dimensions and the whole questionnaire was obtained in the range of 0.660 to 0.875 and as 0.910, respectively.

The MBI consisted of 22 items with the 3 aspects of occupational burnout (emotional exhaustion, depersonalization, and feeling of personal accomplishment). The items were scored based on a 7-point Likert scale ranging from 0 to 6 with the options of never, rarely, on few instances, sometimes, frequently, often, and always, respectively. In the MBI, 9, 5, and 8 items are related to emotional exhaustion, depersonalization, and feeling of personal accomplishment (personal success), respectively. Regarding the emotional exhaustion subscale, a score of above 30, between 18 to 29, and less than 17 indicated, respectively, high, moderate, and low emotional exhaustion. In the subscale of depersonalization, a score of higher than 12, between 6 to 11, and less than 6 represented high, moderate, and low depersonalization, respectively. Regarding the subscale of individual performance, a score above 40, 34-39, and less than 33 illustrated high, moderate, and low individual performance, respectively. The high score of emotional exhaustion and depersonalization and the low score of individual success reflected occupational burnout. Maslach and Jackson have reported an internal reliability coefficient of 0.90, 0.79, and 0.71, respectively, for emotional exhaustion, depersonalization, and individual success (23). The scientific validity of this questionnaire was first confirmed by Filian in Iran and its reliability coefficient was reported to be 0.78 (24).

Finally, the data were analyzed using statistical tests in the SPSS software (version 17.0, SPSS Inc., Chicago, IL, USA). Skewness and elongation

of occupational burnout scores and the significance level of the Kolmogorov-Smirnov test of this variable were in the range of ± 2 and less than 0.050, respectively. However, according to the central limit theorem (CLT) and the high sample size (25, 26), the chi-square test, Pearson correlation, one-way analysis of variance (ANOVA), independent t-test, and multiple linear regression were used for data analysis. In addition, the significance level of the tests was considered to be 0.050.

Results

Of the 161 physicians under study, 70 (43.5%) and 91 (56.5%) were men and women, respectively, and 105 (65.2%) individuals had a working experience of less than 15 years. Moreover, 41 (25.5%), 83 (51.6%), and 37 (23.0%) of the physicians were, respectively, under 35, 35-50, and over 50 years of age. Of these subjects, 60 individuals (94.90%) and the remaining 145 (90.06%) were general practitioners and specialists, respectively. Moreover, 16 (9.9%), 139 (86.3%), and 6 (35.7%) of the doctors had low, moderate, and severe occupational burnout, respectively.

The mean and standard deviation (SD) of the occupational burnout score was 49.47 ± 10.99 with the highest mean related to emotional exhaustion (24.68 ± 5.08). The significance level of the homogeneity of variance (HOV) test was 0.803. The results of the independent t-test and one-way ANOVA showed that there was no significant difference between the mean scores of occupational burnout in terms of gender ($P = 0.109$), service record ($P = 0.277$), and age ($P = 0.339$). Dimensions of occupational burnout were also examined. Mean score of emotional exhaustion was higher among women ($P = 0.015$) and the age group of 35-50 years ($P = 0.040$). The dimensions of occupational burnout were not significantly correlated with the service record ($P > 0.050$) (Table 1).

Table 1: Mean and standard deviation of occupational burnout and its dimensions among physicians working in hospitals of Rafsanjan University of Medical Sciences, Rafsanjan, Iran, by some demographic characteristics in 2016

Variable		Job burnout	Depersonalization	Emotional exhaustion	Personal accomplishment
Gender	Men	47.94 \pm 10.93	7.59 \pm 3.93	23.59 \pm 5.68	16.77 \pm 7.88
	Women	50.74 \pm 10.93	7.14 \pm 2.98	25.58 \pm 4.36	18.02 \pm 9.58
	**P	0.109	0.408	0.015	0.036
Work experience (year)	≤ 15	50.16 \pm 9.54	7.55 \pm 3.35	25.22 \pm 4.60	17.39 \pm 8.55
	> 15	48.18 \pm 13.28	6.95 \pm 3.59	23.66 \pm 5.80	17.57 \pm 9.45
	** P	0.277	0.289	0.085	0.902
Age (year)	< 35	49.29 \pm 10.13	7.85 \pm 3.26	24.02 \pm 5.48	17.41 \pm 8.14
	35-50	50.52 \pm 10.63	7.11 \pm 3.27		17.78 \pm 9.44
	> 50	47.32 \pm 12.56	7.30 \pm 3.40	23.27 \pm 6.21	16.76 \pm 8.67
	*** P	0.339	0.526	0.040	0.843

The results of Pearson correlation test indicated that occupational burnout had a significant and inverse relationship with the personality dimensions of conscientiousness, extroversion, agreeableness,

and Openness to experience and a significant and direct relationship with the personality dimension of neuroticism ($P < 0.001$) (Table 2).

Table 2: Correlation coefficients of personality dimensions with occupational burnout and its dimensions among physicians working in hospitals of Rafsanjan University of Medical Sciences, Rafsanjan, Iran, in 2016

Personality dimensions	Occupational burnout and its dimensions			
	Occupational burnout	Depersonalization	Emotional exhaustion	Decrease in personal accomplishment
Conscientiousness	$r = -0.351$ $P < 0.001$	$r = -0.256$ $P = 0.001$	$r = -0.287$ $P < 0.001$	$r = -0.172$ $P = 0.029$
Extraversion	$r = -0.464$ $P < 0.001$	$r = -0.198$ $P < 0.001$	$r = -0.511$ $P < 0.001$	$r = -0.205$ $P = 0.009$
Agreeableness	$r = -0.459$ $P < 0.001$	$r = -0.144$ $P = 0.068$	$r = -0.570$ $P < 0.001$	$r = -0.186$ $P = 0.018$
Openness to experience	$r = -0.324$ $P < 0.001$	$r = -0.052$ $P = 0.510$	$r = -0.454$ $P < 0.001$	$r = -0.122$ $P = 0.125$
Neuroticism	$r = -0.462$ $P < 0.001$	$r = 0.053$ $P = 0.502$	$r = 0.667$ $P < 0.001$	$r = 0.169$ $P = 0.032$

Multiple linear regression was used to predict occupational burnout among doctors based on personality dimensions, age, gender, and work experience. The Durbin-Watson statistic was equal to 1.591 and the assumption of collinearity of the variables was rejected ($VIF = 1.034-45.183$, tolerance < 0.022). Figures 1 and 2 demonstrate the frequency distribution of error and the dispersion of the occupational burnout variable, respectively. The

regression equation was significant given the CLT and the sample size ($P < 0.001$). Moreover, 23.8% of occupational burnout was explained based on personality dimensions, age, gender, and work experience. Furthermore, the personality dimension of extroversion was able to predict occupational burnout among the physicians ($P = 0.021$, $t = -2.337$) (Table 3).

Table 3: Prediction of occupational burnout among physicians working in hospitals of Rafsanjan University of Medical Sciences, Rafsanjan, Iran, in 2016 based on dimensions of personality, age, gender, and work experience

Model (Inter)	Non-standardized coefficients		Standardized coefficients	t	P
	B	Standard error	β		
Fixed	57.20	6.51		8.79	<0.001
Conscientiousness	3.70	2.63	0.494	1.41	0.161
Extraversion	-8.76	3.76	-1.09	-2.33	0.021
Openness to experience	1.34	1.29	0.169	1.04	0.300
Neuroticism	0.29	1.84	0.041	0.16	0.875
Age	-0.098	1.58	-0.006	-0.062	0.951
Sex	1.46	1.57	0.066	0.93	0.352
Work experience	0.237	2.32	0.010	0.102	0.919

Discussion

Nearly 90% of physicians of Rafsanjan University of Medical Sciences who participated in the study had moderate and severe occupational burnout. This level of exhaustion among the community of doctors confirms the results of a number of national and international studies (27-29). This issue is a danger to healthcare practitioners, so effective steps should be taken to reduce the burden by further reviewing and taking into account personal and environmental factors associated with the problem. The medical profession and its various branches, as one of the most stressful occupations, can affect the mental health of doctors, and in turn

that of patients. Moreover, among the various specialties, there are specialties that face more work pressure, and are more exposed to unwell and elderly, chronic, and incurable patients as well as a state of urgency in their careers, which contribute to the creation of psychological tension, and consequently, have a determinant role in occupational burnout (30). In the present study, the relationship between occupational burnout and personality disorder was significant, which is consistent with the results of research studies by Muharramzadeh et al. (31), Esfahani Savabi et al. (32), and Magnano (33). The four personality dimensions of extroversion, Openness to experience, agreeableness and

conscientiousness, which have an inverse relationship with exhaustion, are open-ended personality dimensions that represent people with the characteristics of excitable, passionate, trustworthy, friendly, conscientious, self-reliant, and cautious in making decisions. These personality traits make people more tolerant of various occupational and environmental stresses, and thus, render a person more resistant to occupational burnout (34).

The relationship between personality depersonalization and the personality dimensions of conscientiousness and extroversion was significant and inverse. Conscientiousness indicates the credibility of the individual, and depersonalization is pessimistic tendencies and negative responses to those who are usually considered to be recipients of services offered by the individual (35). Depersonalization occurs when a person makes an arid response, and shows lack of interest in human relationships and overindulgence in the implementation of laws and regulations, or carries out work only through the implementation of administrative regulations, which is the same as the lack of human relationships which render the individual soulless (12). Conscientious and extroverted employees utilize the effort, perseverance, and positive motivation that have provided them with the conditions for their personality to be well-trusted, and thus, decline their levels of depersonalization, which is largely in accordance with the results of the researches of Sharma and Kashyap (36), Zimmerman et al. (37), and Azeem (38).

The relationship between emotional exhaustion and personality disorder was significant. This finding is consistent with the results of a number of researches (2, 39-42). Among all aspects of occupational burnout, emotional exhaustion is the most significant and most obvious exhaustion (43). Emotional exhaustion appears with symptoms such as chronic fatigue, sleep problems, and some physical symptoms in humans (44). Every time such people refer to occupational burnout, in fact, they are referring to their experience of emotional exhaustion. According to Maslach, the positive aspect of emotional exhaustion is equivalent to the term energy. It means that getting a higher score in emotional exhaustion is a sign of energy reduction (12). These people are more susceptible to stress and pressure (45); therefore, it is understandable that people with more emotional exhaustion feel higher levels of anxiety, hostility, depression, acceleration, and vulnerability, which represent neuroticism. The results of this study confirm this issue.

According to another finding of this study, there was a reduction in the individual success rate of physicians with neuroticism, which was consistent with the study of Swider and Ghorpade (37, 41). Individual success is a condition in which individuals have positive perceptions in their professional efforts and feel that they are progressing in their own jobs and that their work, career, and efforts have positive outcomes. The response of individuals with neuroticism to stressors is poor, so there is a high probability of them treating an ordinary situation as a threat and interpreting small failures as a great frustration. Therefore, they have no positive belief in professional progress and consider success to be unattainable (46).

In this study, given the fact that the subject had to comment on organizational factors, despite the assurance of anonymity in the questionnaires, some refused to respond to the questionnaire due to concerns about the consequences. Moreover, doctors who were aware of the probable outcome of the questionnaire, given their level of education, gave answers that led to their desired results. Common variance error was one of the other constraints. When prediction and criterion variables are derived from the same source, the relationship between the variables may be due to a self-report error. In this study, factors such as expertise, income, marital status, and occupational stress that could have had an impact on occupational depression were not investigated. In future studies, it is suggested that, in addition to personality factors, the abovementioned factors be considered as moderating variables. This research was carried out in Rafsanjan University of Medical Sciences; thus, it is recommended that other organizations be considered in order to increase the generalizability of the results and provide the possibility to compare the results of this study with other studies.

Conclusion

Based on the findings of this study, 90% of physicians had some degree of occupational burnout associated with different personality dimensions. Since physicians play a significant role in promoting the health of the community, it seems necessary that trustee organizations, while investigating the factors affecting occupational burnout and trying to improve the status quo, exploit the personality assessment based on the five-factor model as part of the appointment and organization process.

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