

COMPARISON OF JOB BURNOUT OF DAILY FIXED SHIFT STAFFS AND ROTATING SHIFT STAFFS IN THE SPECIAL ECONOMIC ZONE OF BANDAR IMAM KHOMEINI (GENERAL OF PORTS & MARITIME ADMINISTRATION OF KHUZESTAN PROVINCE)

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ABSTRACT

The aim of this study was to investigate the job burnout and its relationship with factors of staffs' personality and comparison of these factors between fixed shift-staffs and rotating ones in Special Economic Zone of Bandar Imam Khomeini (General of Ports & Maritime Administration of Khuzestan Province). Survey method was used in this study. Study population was all of staffs in General of Ports & Maritime Administration of Khuzestan Province that were 400 and 200 of them were selected based on Cochran's formula as the sample. Random-classified way was used to select the samples from each classification based on work shift (daily fixed and rotating). 120 daily fixed staffs and 80 rotating ones were chosen as the sample. Information collection tool was Maslach burnout inventory (2001) that its validity has been previously confirmed and normalized in studies conducted in the country. Reliability of the mentioned questionnaire in this study was calculated using Cronbach alpha and it was confirmed. Also, t-test was applied to investigate the difference of the job burnout and its components in terms of the staffs' work shift. The results showed that average score of job burnout among daily fixed shift-staffs is significantly lower than that of the rotating ones ($p<0.001$). Also, the results showed that average score of frequency and intensity of emotional exhaustion, average score of frequency and intensity of depersonalization, and average score of frequency and intensity of involvement in daily fixed shift-staffs are significantly lower than those of the rotating ones and average score of frequency and intensity of personal accomplishment in daily fixed shift-staffs are higher than that of the rotating ones ($p<0.001$).

KEYWORDS : Job Burnout, Work Shift, Personnel, Fixed Shift Staffs, Rotating Shift Staffs

Job regardless of the funding can satisfy some of basic needs of human such as mental and physical mobility, social communication, self-esteem feelings, confidence and ability. It can also be a major source of stress. A satisfactory job can become a source of dissatisfaction over time and propel the person to job burnout. Job burnout is caused by tension and stress (Kord Tamini and Kouhi, 2011). The phenomenon of job burnout forms the inevitable part of professional life and it originated from experiences resulted from the job which in turn leads to negative effects in job performances. In recent decades, with advances in technology, rapid changes, more complex work environments, job burnout and stress from work environment have been become one of the most critical issues in the work life and health in complicated industrial world (Babaeeian et al., 2012). Job burnout is resulted from stress and it is usually seen in asymmetric professional relationships. However, antecedents and aftermaths of job burnout are different in every job (Cordes and Dougherty, 1993 quoted by Arizi et al., 2013). The job burnout is a chronic emotional state that has been composed of three components of cognitive, physical, and excitement

exhaustion (Boshldeh et al., 2011). Burnout can be considered as an outcome of chronic decrease of ability resource of a person that is created through encountering long-term stress, especially job pressure (Shirom, 2003). Gutas (2008) believed that job burnout has a wide extent of probable signs such as weakness, disappointment, resignation, irritability, despair, apathy, sense of solitude and separation, excitement burnout, and depersonalization (Arizi et al., 2013). Job burnout has many effects on social, physical, and psychological life of a person (Grau-Alberola et al., 2010). From outcomes of job burnout, we can point to physical complaints, anxiety, sleep problems, depression, disorder in social function, abdication, frequent absences, decreased energy and efficiency, decreased professional satisfaction (Campos et al., 2012). An important point in relationship with job burnout is its direct and indirect costs. Job burnout leads to absenteeism of staffs, decreased work quality, interpersonal conflicts with colleagues, mental-physical problems, changing the job and finally leaving the duty. Leaving the duty is followed by a lot of costs for the organization (Babaeeian et al., 2012). Also, job burnout has a relationship with decreased willingness to work, lack of

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job challenge, deterioration in Jobs, chaos, and psychological welfare (Montero-Marin and Garcia Campayo, 2010). And it is created when persons experience the cycle of lack of resources during a period of time (Arizi et al., 2013). Some of studies considered working shift as a harmful job factor and as one of the inevitable outcomes of technology. However, someone believe that working shift can have undesirable effects on human life from various aspects (Moonk and Folkard, 2005). Job burnout always imposes a lot of costs for staffs and the organization. Increased absenteeisms of staffs, endangering physical and mental health of staffs are such these costs (Babaeen et al., 2012; Montero Marin and Garcia Campayo, 2010). What is clear is that today society is an organizational community. Many scientists believe that the nature of today societies are established and organized by organizations in various forms with different aims, but undoubtedly all of them are conducted based on physical and mental efforts of labor. In general, we can say that the existence of efficient manpower is main excellence of an organization toward the other organizations (Kord Tamini and Kouhi, 2011). Therefore, protection of manpower and material resources and supplying health of workers, entrepreneurs, and employers either with attention to manpower or from aspect of preventing the waste of material resources has a great importance. These issues reveal the necessity of conducting this study. It is not yet determined that can working shift be effective on the occurrence of job burnout of staffs or not? And can the type of the job namely being daily and rotating be effective on the occurrence of job burnout? This study aims to investigate these points.

Research background

The study results of Nayoung et al. (2010) about effective individual and job factors on job burnout showed that age and job-based variables were the most significant indices of excitement exhaustion and depersonalization. In relation with individual success level, age and working hours were the most significant indices with a positive correlation. In a study Ozyurt (2006) investigated the job burnout in 598 physicians. The results showed that we can prevent job burnout by increasing job satisfaction. Also, the results

showed that more working shifts are accompanied by more depersonalization and excitement exhaustion and less personal adequacy. Also, study results of Ozyurt (2006) indicated that reduces working hours, no consecutive shifts, and adding entertainment programs for staffs can prevent job burnout. Sharma et al. (2006) concluded from their study that working at night hours can increase the job burnout. The study results of Park and Lake (2005) that was conducted on 4320 nurses showed that the average working hours in a week is significantly related to job burnout in nurses. The study result of Elpern and Covert (2005) also indicated that the probability of occurrence of job burnout will decrease with reduced working hours. In the study of Neirel, Shirom, and Ismaeel (2004) some questionnaires were sent in order to investigate the work pressure, job burnout, and job satisfaction for a random sample. These persons were specialist physician (ophthalmology, dermatologist, ENT specialist, obstetrician, cardiologist, and general surgeon). In obtained results, working shift and hours in a week have a positive and significant relationship with work pressure and burnout.

Method

The method of this study is a survey that is the most common method in quantitative researches. The population of the study is all personnel of General of Ports & Maritime Administration of Khuzestan Province that are more than 400. The volume of the sample was determined 200 based on Morgan Table. Random-classified way was used as the sampling method and the samples from each classification were selected based on working shift (daily and rotating). Thus, 120 daily fixed personnel and 80 rotating ones were chosen as the sample. In this study, Maslach burnout inventory (2001) has been used in order to collect data and information. Maslach et al. (2001) believe that MBI is only tool for assessment of job burnout aspects. MBI has been used in many studies related to Maslach burnout inventory or job burnout either abroad or in the country. The fourth component namely involvement is optional in this test. In most conducted studies that have selected Maslach burnout inventory, a 22-question form with three-components of emotional exhaustion, personal performance, and depersonalization was applied but in this study, Maslach 25-

question form containing four components as well as involvement component with three questions was used. This questionnaire has 25 questions. Nine questions are related to estimation of emotional exhaustion; 5 questions are related to assessment of depersonalization; 8 questions are in the field of personal adequacy; and 3 questions are about involvement. He states emotional exhaustion as mental stress and feeling pressure and destroying excitement resources in a person. Depersonalization is factually a negative and pessimistic attitude toward people. Reduced sense of personal adequacy is a decreased sense of merit and ability of successful implementation of a duty in doing a job with the others. The main focus of an involved person is on his/her own job and lives for his/her job and is immersed in his/her job (being eager in a job) (Maslach et al., 2001: 397-422). In every question, the person chooses an option from zero (never) to six (everyday). The total scores related to the questions of each aspects of job burnout are separately calculated. In emotional exhaustion aspect, the scores of 27 and higher, fewer than 16, and 17 to 26 indicate high, low, and medium level of emotional exhaustion, respectively. In depersonalization aspect, the scores of 13 and higher, fewer than 6, and 7 to 12 indicate high, low, and medium level of depersonalization, respectively. In personal adequacy aspect, the scores of 39 and higher, fewer than 31, and 32 to 38 indicates high, low, and medium level of personal adequacy, respectively. If emotional exhaustion or depersonalization of a person is in a high and low level, respectively it means he/she has a job burnout. Validity and reliability of the questionnaire was confirmed by Filian for first time in Iran who reported its reliability using 78 percent test-retest method and after that it has been used in many studies in Iran (Momeni et al., 2009: 116). Momeni et al. (2009) and Atef et al. (2006)

reported a high reliability of 0.80 for job burnout components. In this study, reliability coefficient was calculated using Cronbach alpha after completing 30 questionnaires by study samples. The reliability coefficient of job burnout, emotional exhaustion aspects, depersonalization, personal adequacy, and involvement were obtained 0.825, 0.820, 0.899, 0.836, and 0.789, respectively indicating acceptable reliability of the study questionnaires. Data analysis in this study has been presented using SPSS software release 19 in two descriptive and inferential sections. T-test was used in inferential section according to research hypotheses.

Research findings

Among daily job staffs, 50 percent were Bachelor of Science, 20 percent were associate's degree, 15 percent were Diploma, and 15 percent were Master of Science/Art. Among rotating job staffs, 40 percent were Bachelor of Science, 30 percent were associate's degree, 16 percent were under Diploma, and 14 percent were Diploma. Among daily job staffs, 37 percent of respondents were 30 to 40 years old, 34 percent were 40 to 50 years old, 15 percent were higher than 50 years, and 14 percent were lower than 30 years. Among rotating job staffs, 57 percent of respondents were 30 to 40 years old, 22 percent were lower than 30 years old, 12 percent were higher than 50 years, and 7 percent were 40 to 50 years. Among daily job staffs, 65 percent of respondents were married and 35 percent of them were single. Among rotating job staffs, 57 percent of respondents were married and 42 percent of them were single. Among daily job staffs, 77 percent of respondents were male and 22 percent of them were female. Among rotating job staffs, 100 percent of respondents were male. Among daily job staffs, 35 percent of respondents had a work experience of 5 to 10 years, 25 percent had more than

Table 1: Distribution of the Respondents' Job Burnout in Terms of Job Shift

Job shift	Frequency	Percent	Valid percent	Cumulative percent
Daily fixed	With burnout	6	5.0	5.0
	Without burnout	114	95.0	95.0
	Total	120	100	100.0
Rotating	With burnout	23	28.8	28.8
	Without burnout	57	71.3	100.0
	Total	80	100.0	

Table 2 : Descriptive Indices of Job Burnout Components (Frequency) in Terms of Job Shift

Job shift	Number	Average	Standard deviation
Daily fixed	Emotional exhaustion (frequency)	120	12.85
	Personal adequacy (frequency)	120	24.30
	Depersonalization (frequency)	120	6.35
	Involvement (frequency)	120	6.62
Rotating	Emotional exhaustion (frequency)	80	26.64
	Personal adequacy (frequency)	80	18.57
	Depersonalization (frequency)	80	11.61
	Involvement (frequency)	80	10.86

Table 3 : Descriptive Indices of Job Burnout Components (Intensity) in Terms of Job Shift

Job shift	Number	Average	Standard deviation
Daily fixed	Emotional exhaustion (intensity)	120	13.53
	Personal adequacy (intensity)	120	26.62
	Depersonalization (intensity)	120	6.30
	Involvement (intensity)	120	6.83
Rotating	Emotional exhaustion (intensity)	80	28.86
	Personal adequacy (intensity)	80	23.54
	Depersonalization (intensity)	80	12.57
	Involvement (intensity)	80	11.52

20 years work experience, 15 had 2 to 5 years, 12 percent had 10 to 15 years, 7 percent had 15 to 20 years, and 5 percent had lower than 2 years. Among rotating job staffs, 36 percent of respondents had a work experience of 5 to 10 years, 27 percent had 2 to 5 years work experience, 21 had 10 to 15 years, and 15 percent had 15 to 20 years. Among daily job staffs, the job responsibility of 42 percent of respondents were top expert, 35 percent were expert, 15 percent were technician, and 7 percent were workers. Among rotating job staffs, the job responsibility of 39 percent of respondents were expert, 36 percent were technician, and 25 percent were workers.

As can be seen in Table 1, among daily fixed staffs, 5 percent of respondents have job burnout and 95 percent do

not have it. Among rotating staffs, 29 percent of respondents have job burnout and 71 percent do not have it.

As can be observed from Table 2, among daily fixed job staffs, the average frequency of personal adequacy, emotional exhaustion, involvement, and depersonalization is 24.3, 12.85, 6.62, and 6.35, respectively. Among rotating job staffs, the average frequency of personal adequacy, emotional exhaustion, involvement, and depersonalization is 26.64, 18.57, 11.61, and 10.86, respectively.

As can be observed from Table 3, among daily fixed job staffs, the average of personal adequacy, emotional exhaustion, involvement, and depersonalization is 26.62, 13.53, 6.83, and 6.3, respectively. Among rotating

Table 4 : Comparing the Difference of Job Burnout Between Daily Working Shift Personnel and Rotating Ones

	Job shift	Number	Average	Standard deviation	t	Level of significance
Job burnout	Daily fixed	120	50.13	13.839	-7.794	P<0.001
	rotating	80	67.69	17.956		

Table 5 : Comparing the Difference of Frequency of Job Burnout Aspects Between Daily Working Shift Personnel and Rotating Ones

Frequency	Job shift	Number	Average	Standard deviation	t	Level of significance
Emotional exhaustion	Daily fixed	120	12.85	9.243	-10.839	P<0.001
	rotating	80	26.64	8.121		
Personal adequacy	Daily fixed	120	24.30	6.547	7.572	P<0.001
	rotating	80	18.58	2.049		
Depersonalization	Daily fixed	120	6.35	6.35	-5.554	P<0.001
	rotating	80	11.61	11.61		
Involvement	Daily fixed	120	6.63	6.63	-6.133	P<0.001
	rotating	80	10.86	10.86		

Table 6 : Comparison of the Difference of Job Burnout Aspects Between Daily Fixed Shift Personnel and Rotating Ones

Intensity	Job shift	Number	Average	Standard deviation	t	Level of significance
Emotional exhaustion	Daily fixed	120	13.53	9.096	-10.791	P<0.001
	rotating	80	28.88	10.881		
Personal adequacy	Daily fixed	120	26.63	7.153	3.299	P<0.001
	rotating	80	23.54	5.322		
Depersonalization	Daily fixed	120	6.30	7.186	-5.777	P<0.001
	rotating	80	12.58	8.011		
Involvement	Daily fixed	120	6.83	4.975	-6.036	P<0.001
	rotating	80	11.53	5.972		

job staffs, the average of personal adequacy, emotional exhaustion, involvement, and depersonalization is 28.86, 23.54, 12.57, and 11.52, respectively.

As can be seen in Table 4, the average of two groups is different from each other. The average of job burnout in daily fixed working shift personnel is significantly lower than that of the rotating ones ($p<0.001$).

As can be seen in Table 5, the average of two groups in frequency of emotional exhaustion, personal adequacy, depersonalization, and involvement from job burnout aspects is different from each other. The average of frequency of personal adequacy, frequency of depersonalization and frequency of job involvement in daily fixed working shift personnel are significantly lower

than that of the rotating ones ($p<0.001$). Also, frequency of personal adequacy with daily fixed working shift is significantly higher than that of the ones with rotating working shift ($p<0.001$).

As can be seen in Table 6, the average of two groups in emotional exhaustion, personal adequacy, depersonalization, and involvement from job burnout aspects is different from each other. The average of personal adequacy, depersonalization and job involvement in daily fixed shift personnel are significantly lower than that of the rotating ones ($p<0.001$). Also, personal adequacy with daily fixed working shift is significantly higher than that of the ones with rotating shift ($p<0.001$).

DISCUSSION AND CONCLUSION

The results of the present research showed that the average job burnout among daily fixed shift staffs is less than that of the rotating job personnel. Also, the results showed that significant difference in the frequency of respondents' emotional exhaustion in terms of working shift. And the mean frequency of emotional exhaustion in daily occupations is less than that of the rotating jobs. The frequency of personal adequacy is different in terms of working shift and the average personal adequacy in daily jobs is more than that of the rotating ones. The frequency of depersonalization is different in terms of working shift and the average depersonalization in daily fixed shift is less than that of the rotating ones. The frequency of involvement in the daily fixed shift is less than that of the rotating ones. Intensity of emotional exhaustion is different in terms of working shifts. And the average intensity of emotional exhaustion in daily occupations is less than that of the rotating ones. Intensity of personal adequacy is different in terms of working shift.

Intensity of personal adequacy is different in terms of working shift; average of personal adequacy in daily jobs is more than rotating ones. Depersonalization differs greatly depending on the working shift. Average of depersonalization at daily jobs is less than that of the rotating ones. Intensity of involvement differs depending on the working shift and average intensity of involvement in the daily jobs is less than that of the rotating ones. Ozyurt Studies (2006) are consistent with the findings of the present research in this area. Results of Ozyurt (2006) showed that more working shifts are accompanied by more depersonalization and more emotional exhaustion and less personal adequacy that this finding is consistent with our results. Also, the results of Ozyurt (2006) suggest that the reduction in working hours and lack of consecutive shifts and adding entertainment programs for staffs can prevent the occurrence of job burnout. Results of Nayoung et al. (2010) also showed the higher personnel working hours, the more job burnout, emotional exhaustion and depersonalization, and they work continuously for three working shifts and have more working hours than that of the fixed shift ones. Hence, this finding is consistent with our

results. Sharma et al. (2006) concluded in their study that night shift work could increase the level of job burnout that is confirmed in this study and hence this finding is consistent with the findings of the present research. Results of Park and Lake (2005) also showed that the average work hours in a week is significantly related to job burnout of personnel and inherently rotating personnel assign their time in work week to the work and therefore the occurrence of job burnout is more possible among them. The results of Elpern and Covert (2005) also indicate that the probability of job burnout will be decreased with reducing work hours. These findings are in consistent with the present study. The study of Neirel, Shirom, and Ismaeel (2004) that was performed on the physicians showed that shift and work hours in a week have a positive significant relationship with work pressure and job burnout that this finding is in consistent with the present study. Based on his results, Bulik (2003) reported that the more stress, the more burnout and emotional exhaustion and depersonalization. It can maybe interpreted that because rotating personnel are far from their own family in work hours, they must bear more concerns and stresses; thus, they are more exposed to job burnout and regarding this that they are working in compressed work hours it can be probably said that they bear more job stress and these are underlying occurrence of more job burnout among them. The results of Sotoudeh Asl and Bakhtiari (2006) showed that enhancement of work hours more than 8 hours per day significantly leads to job burnout and emotional exhaustion. Also, the results of this study indicated that emotional burnout among is more among rotating staffs. This finding is in consistent with the present study. Also in this relation, Sotoudeh Asl and Bakhtiari (2006) reported that attention to the development of interpersonal relationships, control, and change of factors such as shift and work hours can result in reduction of job burnout and increase of advancement level and personal improvement of staffs. Average of openness with respect to experience in daily jobs is more than that of the rotating jobs. Shifts are substantially abnormal and unusual. Humans are working day and day-oriented from a biological perspective. The researches show that shift bearing of various people are different from each other.

While some of shift workers experience some problems just after several months, the others may be always healthy during their work way. In other words, some people adapt with shift working well while some cannot basically adapt. Those who cannot adapt will encounter with many problems. What is concluded from the findings is that work shift is effective on job burnout and rotating personnel are in job burnout danger more daily fixed shift ones. Policy makers and planners can use the findings of the present study to improve mental health in workplaces. More job burnout of rotating staffs can be due to the work pressure and their increased work hours in workplaces. Personal adequacy was also low in staffs that could be due to the less attention to them in support and persuasive issues and less use of their viewpoints in workplaces despite of their great efforts. This phenomenon must be eliminated considering different levels of job burnout in personnel and its outcome on the quality of personnel efficiency and absence of staffs in work using adopting moderator and preventive ways. Strategies for reducing and controlling occupational stressful factors such assigning a percentage of the welfare budget to the personnel, increased financial and moral incentives for staffs on various occasions, creating sports clubs and recreation, providing labors, financial and spiritual supports of personnel by managers, holding regular meetings between managers and staff, training problem solving skills, stress management, increased wages and benefits, employee participation in professional and organizational decision-making and publishing various social and cultural issues about staffs, and training staffs are some ones. Finally it is recommended that regarding high levels of emotional exhaustion and reduced personal adequacy achieved and of proven role of staff burnout in reducing personnel efficiency, more attention by the authorities and stakeholders will be taken to improve conditions in the workplace. Attention to the views of staffs and the exerting their ideas as possible by the authorities can be effective on improving their performance and reducing job burnout aspects. According to findings of the study, more awareness, studying factors of making job burnout, adopting tact in the field of prevention, control, training the methods and correct skills for coping with stress and

eliminating factors predisposing this phenomenon are considered of the other necessities.

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