

The Study of Relationship between the Organizational Structure and Job Burnout of the Employees of Technical Laboratory and Soil Mechanic Company

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ABSTRACT

The main purpose of the current study is to investigate the relationship between the organizational structure and job burnout among the employees of the Technical Laboratory and Soil Mechanic Company of Ministry of Road and Urban Development. The current study is applicable in terms of purpose and it is from the descriptive-measuring type in terms of method. The statistical society of the current study includes all the managers and experts and employees of headquarter of the Technical Laboratory and Soil Mechanic Company of Ministry of Road and Urban Development who are 190 persons. The sample volume was determined 123 persons through the Krejcie and Morgan sampling table who were selected in simple random sampling method. Data collecting tools for this research has been questionnaire and two researcher-made questionnaires have been used (organizational structure questionnaire and job burnout questionnaire). The content validity and Cronbach's alpha coefficient have been orderly used in order to determine validity and reliability of the questionnaires. Also, the SPSS statistical software and appropriate statistical tests like KS normality test and Pearson correlation test have been used in order to analyze data. The results obtained from the research indicated that there is a significant relationship between the organizational structure and its components and job burnout.

KEY WORDS: organizational structure, job burnout, technical laboratory and soil mechanic

1. INTRODUCTION

The organizational structure is the framework of relationships ruling jobs, systems and operational processes and individuals and groups who attempt for achieving the goal [1]. The structure of an organization can be considered the set of methods during them the activities of the organization are divided into determined duties and coordination is established among them[2]. Therefore, the organizational structure determined the relationships in the organization and also the position of the personnel within the organization and their limitations and authorities.

Many factors have been mentioned in determination of the structural aspects of the organization; administrative components, independence, centralization, complexity, delegation of authority, formalization, composition, careerism, control area, specialization, standardization and vertical area can be referred from these factors[3]; most of the organizational theorists agree on the three aspects of centralization, formalization and complexity (Fry & Slocum) that these aspects are still used many times in the organizational research [4]. In each of these aspects, the universities may be different. Now, we refer to these aspects briefly:

Complexity refers to the denotation amount exists in the organization and it is divided into three categories; horizontal denotation which refers to the denotation amount among the organizational units based on the organization's situation, essence and their duties and the educations and trainings they have learnt. The most important evidence which indicates the horizontal denotation is the inter-organizational specialization and segmentation. Vertical denotation refers to the depth or height of the organizational structure. With the increase of levels of organizational hierarchy, the vertical denotation increases and complexity of the organization gets more; and the geographical denotation refers to the distribution of offices, factories and the personnel of the organization based on the geographical areas [3].

Formalization means the extent to which an organization depends upon the laws, regulations and procedures in order to direct its employees' behavior; it is the amount or extent to which the organizational jobs have been standardized. If the job has a high formalization, its operator has the minimum freedom for doing activities related to that job and the matter that when and how it must be done [3]. Formalization is not limited to determining what the duty of each person is and how he must do it, but it can more widely determine all types of behaviors in the organization such as coding the clothes, work hours, using administrative equipment or using the internet.

Organizational centralizations means that the center of decision making is at the top of organizational hierarchy, or in other words, the decision making authority is limited to the head of the organization and all or at least the majority of the decision of the organization are made by senior managers and then flow in the organizational levels and base of the organizational pyramid and generally, when the decisions are made in the high organizational levels, that organization is called centralized [3, 5].

2. Issue Statement:

Today, the job burnout has attracted a significant attention to itself from the organizational leaders and researchers and it has been majorly communicated with the organizational and individual important consequences such as occupational performance, organizational behavior, occupational attitudes and negative psychological consequences [6]. Job burnout is a kind of professional risk which is accompanied by decrease in physical and mental energy amount in the employees [7] According to the theory of fitting between the individual and work environment, the organizational factors play a significant role in formation of job burnout. Job burnout leads to psychological pressure for the individual in long term; so that the mismatch between the individual and his work environment can be considered as one of the main reasons of job burnout. One the fields which can result in weak fit between the individual and his work environment is the organizational structure. Formalization, organizational laws and regulations can guide the employees in doing their duties and solving the issues and help them in these cases. But it must be noted that formalization, organizational laws and regulations be in the way that provide guidelines and directions for staffs in doing their duties and decrease uncertain expectations. Lack of centralization and interfere in organizational decision making allow the staffs to feel that they have some control over their work life and the organization values them. Lack of control over the work environment can also result is sense of inability and also job burnout [8].

Job burnout has negative impact on staffs, and their families and friends and generally on the society and it can reduce the quality of staffs' life both in work and living environment. Over time, the job burnout can lead to increase in problems at home and also withdrawing from family and friends. Although job burnout may occur in any occupation, but it is a form of common global infectious disease and problem in human services professions. The process of job burnout occurs due to chronic occupational pressure and stress [9].

The researchers believe that the organizational factors have a significant impact on job burnout. For example, Schools et al. (1995) suggested that where the persons are participated in the decision makings related to their occupation and are able to determine their important occupational processes, the possibility of job burnout decreases. On the other hand, the formal structures and regulations and inflexible policies can lead to increase in job burnout among the employees. Their researches have indicated that in the organizations with participatory culture which are based of work teams, the personnel experience job burnout lesser [10].

The organizational structure is the framework of relationships ruling occupations, systems and operational processes and individuals and groups attempting for achieving goals. Many factors have been mentioned in determination of the structural aspects of the organization; administrative components, independence, centralization, complexity, delegation of authority, formalization, composition, careerism, control area, specialization, standardization and vertical area can be referred from these factors; most of the organizational theorists agree on the three aspects of centralization, formalization and complexity (Fry & Slocum) that these aspects are still used many times in the organizational research [3].

Job burnout is a painful experience for personnel and a cost consuming phenomenon for the organizations. According to the existing information in European Union, every year twenty millions euros allocated to the costs caused by job burnout and this cost also reaches 350 million dollars in the United States annually. The table 1-1 indicates some costs caused by job burnout.

Table 1-2: costs caused by job burnout

Indirect costs	Direct costs
Losing energy and vitality	Participation and membership
Occupational dissatisfaction	Absence
Low commitment	Leaving job
Decrease in relationships' quality	Striking / stopping work
Suspiciousness	Occupational performance
Enmity	Quality / quantity of outputs
Aggression	Accidents

A review of the studies done in the field of job burnout indicates that the organizational structure is one of the influencing factors on this matter. Hence, the aim of the current study is to investigate the relationship between the organizational structure and the job burnout of the employees of Technical Laboratory and Soil Mechanic Company of the Ministry of Road and Urban Development.

3. RESEARCH METHODOLOGY

The current study is applicable in terms of purpose and it is from the descriptive-measuring type in terms of method. The statistical society of the current study includes all the managers and experts and employees of headquarter of the Technical Laboratory and Soil Mechanic Company of Ministry of Road and Urban Development who are 190 persons. The sample volume was determined 123 persons through the Krejcie and Morgan sampling table who were selected in simple random sampling method. Data collecting tools for this research has been questionnaire and two researcher-made questionnaires have been used (organizational structure questionnaire and job burnout questionnaire). To determine the formal validity and content of the research tools, the experts have evaluated the questionnaires and the necessary corrections have been done according to the opinion of supervisor professor and consultant and after corrections, they have been surveyed. Also, the Cronbach’s alpha has been used in order to determine the reliability of the questionnaires and its value has been calculated 0.96 for the questionnaire of organizational structure and 0.74 for the questionnaire of job burnout. Regarded to the fact that the calculated reliability value is larger than 0.7, it can be said that the research tool has good and acceptable reliability. In addition, SPSS statistical software and appropriate statistical tests like KS normality test and Pearson correlation test have been used in order to analyze data.

4. Research Findings:

4.1. Normality test:

Table 1-4:the table of distribution index of the variables related to the research hypotheses

Significant level	k-s, the statistic of Kolmogorov test	Elongation	Skewness	Variables
0/061	2/084	0/616	-0/191	Complexity
0/050	1/450	0/449	-0/375	Formalization
0/094	1/235	0/166	-0/069	Centralization
0/099	1/226	0/673	0/335	Job burnout
0/078	1/275	0/807	0/038	Organizational structure

As it can be observed in the above table, Skewness of all the components of job burnout is located between 0.00 and 0.5 and due to the fact that the society’s mode is larger than its median, the society’s sequence has been located in the left side (most of the numbers are negative) but the numbers’ absolute value is considered in order to comply with the normality and because it is between 0.00 and 0.5, as a consequence, their distribution is almost symmetrical. Of course, the Kolmogorov – Smirnov test (K-S) is equal to 2.084, 1.450 and 1.235 orderly for complexity, formalization and centralization and regarded to the significance level of larger than 0.05 for formalization and centralization, it can be concluded that they are normally distributed; of course the variable of job burnout and organizational structure have Skewness coefficient absolute value between 0.1 and 0.5 which is a little different from the normal distribution. Also, due to the statistics of Kolmogorov – Smirnov for the variables of job burnout and complexity which are orderly equal to 1.226 and 1.257 and due to the significance level of larger than 0.05, it can be concluded that they are normally distributed and the normality of scores distribution of the variables is confirmed.

4-2. Testing Hypotheses:

Table 21-4: The first sub-hypothesis: there is a relationship between complexity and job burnout.

Standard error of the determination coefficient	Significance level of correlation coefficient	Balanced determination coefficient	Determination coefficient	Correlation coefficient	Durbin – Watson index
0/458	0/0001	0/007	0/001	0/038	1/942

As it can be seen in the above table, the correlation coefficient between the two variables of organizational complexity and job burnout equals to 0.038 with the determination coefficient of 0.001 and also the linear relationship between the two variables or the significance level of lower than 0.05 is confirmed. Therefore, 0.01 percent of variance of the dependent variable of job burnout is expressed by using complexity changes. Also, camera – Watson test which determines the regression model’s error is equal to 1.942 which is close to the number 2 and therefore the dependency of the model’s error is confirmed. Camera – Watson statistic is between 0 and 4. If there is no serial correlation between the residuals, this statistic’s value must be close to 2. If it is close to 0, this indicates the positive correlation and if it is close to 4, this indicates negative correlation. In general, if this statistic is between 1.5 and 2.5, there is no concern.

Table 3-4:The table of regression coefficients and t and fisher statistics related to the impact of complexity on the job burnout

Significance level of fisher test	Fisher statistic	Significance level	T statistic	Coefficients value	Regression model
0/00010	10/176	0/001	9/418	3/173	Constant value
		0/0001	3/420	0/455	Complexity coefficient

As it is observed in the above table, the constant value and the coefficient of variable of complexity in the regression model are orderly equal to 3.173 and 0.455; regarded to the statistics of t test and the significance level which is smaller than 0.05 the presence of regression coefficients of the variables is confirmed. Also, in order to examine the rightness of regression model, fisher statistic which is equal to 10.176 with the significance level of smaller than 0.05 indicate that the variable of complexity is capable to significantly predict the variable of job burnout.

The second sub-hypothesis: there is a relationship between the formalization component of organizational structure and job burnout.

Table 4-4: correlation coefficient and determination coefficient and significance level

Standard error of the determination coefficient	Significance level of correlation coefficient	Balanced determination coefficient	Determination coefficient	Correlation coefficient	Durbin – Watson index
0/458	0/0001	0/008	0/0001	0/016	1/943

As it can be seen in the above table, the correlation coefficient between the two variables of complexity and structural capital equals to 0.016 with the determination coefficient of 0.0001 and also the linear relationship between the two variables or the significance level of lower than 0.05 is confirmed. Therefore, 0.01 percent of variance of the dependent variable of job burnout is expressed by using changes of formalization of organizational structure. Also, camera – Watson test which determines the regression model's error is equal to 1.943 which is close to the number 2 and therefore the dependency of the model's error is confirmed.

Table 4-5: the table of regression coefficients and t and fisher statistics related to the impact of complexity of the job burnout

Significance level of fisher test	Fisher statistic	Significance level	T statistic	Coefficients value	Regression model
0/0001	26/176	0/001	10/408	3/408	Constant value
		0/0001	4/420	0/460	Complexity coefficient

As it is observed in the above table, the constant value and the coefficient of variable of complexity in the regression model are orderly equal to 3.408 and 0.460; regarded to the statistics of t test and the significance level which is smaller than 0.05 the presence of regression coefficients of the variables is confirmed. Also, in order to examine the rightness of regression model, fisher statistic which is equal to 26.176 with the significance level of smaller than 0.05 indicate that the variable of formalization of organizational structure is capable to significantly predict the variable of job burnout.

The third sub-hypothesis: there is a relationship between the centralization component of organizational structure and job burnout.

Table 4-6: correlation coefficient and determination coefficient and significance level

Standard error of the determination coefficient	Significance level of correlation coefficient	Balanced determination coefficient	Determination coefficient	Correlation coefficient	Durbin – Watson index
0/457	0/002	0/006	0/001	*0/077	1/935

As it can be seen in the above table, the correlation coefficient between the two variables of centralization and job burnout equals to 0.077 with the determination coefficient of 0.05 and also the linear relationship between the two variables or the significance level of lower than 0.05 is confirmed. Therefore, only 6 percent of variance of the dependent variable of job burnout is expressed by using centralization changes. Also, camera – Watson test which determines the regression model's error is equal to 1.935 which is close to the number 2 and therefore the dependency of the model's error is confirmed.

Table 4-7: the table of regression coefficients and t and fisher statistics related to the impact of centralization on human capital

Significance level of fisher test	Fisher statistic	Significance level	T statistic	Coefficients value	Regression model
0/004	10/176	0/001	0/000	3/503	Constant value
		0/0001	0/003	0/407	Complexity coefficient

As it is observed in the above table, the constant value and the coefficient of variable of centralization in the regression model are orderly equal to 3.686 and 0.419; regarded to the statistics of t test and the significance level which is smaller than 0.05 the presence of regression coefficients of the variables is confirmed. Also, in order to examine the rightness of regression model, fisher statistic which is equal to 9.103 with the significance level of smaller than 0.05 indicate that the variable of centralization is capable to significantly predict the variable of job burnout.

The main hypothesis: there is a relationship between the organizational structure and job burnout.

Table 4-8: correlation coefficient and determination coefficient and significance level

Standard error of the determination coefficient	Significance level of correlation coefficient	Balanced determination coefficient	Determination coefficient	Correlation coefficient	Durbin – Watson index
0/458	0/01	0/050	0/056	*0/336	1/941

As it can be seen in the above table, the correlation coefficient between the two variables of structure and job burnout equals to 0.336 with the determination coefficient of 0.056 and also the linear relationship between the two variables or the significance level of lower than 0.05 is confirmed. Therefore, 5.6 percent of variance of the dependent variable of job burnout is expressed by using organizational structure changes. Also, camera – Watson test which determines the regression model’s error is equal to 1.941 which is close to the number 2 and therefore the dependency of the model’s error is confirmed.

Table 4-9:the table of regression coefficients and t and fisher statistics related to the impact of occupational and organizational structure

Significance level of fisher test	Fisher statistic	Significance level	T statistic	Coefficients value	Regression model
0/001	10/129	0/001	5/712	3/548	Constant value
		0/02	3/183	0/546	Complexity coefficient

As it is observed in the above table, the constant value and the coefficient of variable of organizational structure in the regression model are orderly equal to 3.227 and 0.546; regarded to the statistics of t test and the significance level which is smaller than 0.05 the presence of regression coefficients of the variables is confirmed. Also, in order to examine the rightness of regression model, fisher statistic which is equal to 10.129 with the significance level of smaller than 0.05 indicate that the variable of organizational structure is capable to significantly predict the variable of job burnout.

5. Conclusion:

The main purpose of the current study is to investigate the relationship between the organizational structure and job burnout among the employees of the Technical Laboratory and Soil Mechanic Company of Ministry of Road and Urban Development. The results obtained from the research indicated that there is a positive and significant relationship between the organizational structure and all of its three components (that is to say complexity, formalization and centralization) and the job burnout.

The correlation coefficient between the two variables of structure and job burnout equals to 0.336 with the determination coefficient of 0.056 and also the linear relationship between the two variables or the significance level of lower than 0.05 is confirmed. Therefore, 5.6 percent of variance of the dependent variable of job burnout is expressed by using organizational structure changes. In addition, in order to examine the rightness of regression model, fisher statistic which is equal to 10.129 with the significance level of smaller than 0.05 indicate that the variable of organizational structure is capable to significantly predict the variable of job burnout.

From the findings of the current research, it can be concluded that as the organizational structure is more complex and formal, the staffs experience job burnout more; therefore, regarded to the theoretical definition of organizational structure which depends upon the position of decision making methods and attention to the organizational regulations and principles, in more complex or formal organizational environments, this lead to many challenges for the organizations. So, the human force will be confused and in long term, the staffs experience more job burnout. Due to the obtained findings from the research some suggestions are presented in the following:

1. It is recommended to the managers to eliminate unnecessary organizational positions and consider organizational structure simpler as more as possible, in this case the staffs will have more performing space in the organization and consequently they will not experience job burnout in long term.
2. It is recommended to the managers that as the inter-organizational environment is easier to access for the staffs, consequently the staffs have more coordination and more organizational relationships will rule the organization which in its turn decreases individual job burnout.
3. It is recommended to the managers that in specialization look, the people be placed in the appropriate occupation and profession which are their favorite job and they are dynamic in doing that organizational duty and job properly.
4. It is recommended to managers and staffs to substitute the formal and complex organizational levels with inter-organizational communicative networks. Stronger communicative networks are possible in the frame of participatory decision making of managers; therefore, as the staffs and managers participate in organizational meetings more, the dynamicity and performance of the staffs increase and thus they will experience lesser job burnout.
5. It is recommended to managers and staffs to create a work life method with a relationship with the occupational duties which its failure is also accompanied by reward in order to avoid from excessive fatigue in organizational and job complexity.

6. One of the most important subjects which have been ignored by the managers is the way of creation of fatigue. The organizational and hierarchical different levels will cause the increase in job burnout; thus, the managers are recommended to reduce the job burnout by appropriately dividing the responsibilities and suitable and formative organizational communication with the staffs.

7. due to the fact that severely dealing with the activities related to unreal occupation and purposes and not achieving the work are from the warning stages and signals of job burnout, so the staffs are recommended to regain their lost energy even if it is a short time in order to drink tea or rest regarded to the much complexity of the organizational structure.

8. Regarded to the organizational structure, the managers are recommended to create suitable conditions such as calm work environment, appropriate light for rooms, appropriate heat for rooms, and appropriate work hours and shifts to be able to decrease the stress related to the occupational problems and responding the clients prevent from the job burnout.

9. The managers are recommended to decrease the staffs' job burnout by appropriate division of organization's duties and positions due to the physical and psychological morale of them.

10. The staffs and managers are recommended to prevent from job burnout through increasing organizational communication networks and balancing the centralization and complexity of the organizational structure.

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