



**Investigating the mediating role of Organizational Empowerment  
between the factors of Job Stress and Organizational Productivity**

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**Investigating the mediating role of Organizational Empowerment between the  
factors of Job Stress and Organizational Productivity**

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**ABSTRACT**

The purpose of this study is to investigate the mediating role of organizational empowerment between the factors of job stress and organizational productivity of employees of Saipa Darab Company. The study population consisted of 120 employees. A census method was used to select the sampling. Job empowerment, job stress and job productivity questionnaires were used for conducting the research. In this research, in addition to descriptive statistics, Pearson correlation coefficient, regression analysis, and path analysis were used. Based on the results, there is a significant relationship between job stress and empowerment; productivity and stress, empowerment and productivity. Also, empowerment components can predict job stress significantly. Empowerment components can predict productivity significantly. And the culture component has the most (direct) effect on productivity and the component of participation has the least effect on productivity. The dimensions of job stress can significantly predict productivity. The component of support of authorities has a direct effect on productivity and the component of changes has the least (direct) effect on productivity. Job stress plays a significant mediator role in the relationship between empowerment and productivity.

**Keywords:** Job Stress, Job Empowerment, Organizational Productivity



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### **1. INTRODUCTION**

One of the main reasons for the rise and fall of nations over the history is to increase or decrease their national productivity. And national productivity also increases in conditions where the productivity of one country's organizations is optimal (Saatchi, 2008). One of the variables that play a critical role in reducing productivity is the amount of stress that affects employees in the organization. Job stress can be considered a combination of stressors in job-related situations, which most people agree on being stressful. Job stress as a reciprocal interaction between the working conditions and the individual characteristics of the employed is excessive amount of demands of the workplace and consequently pressures associated with it that individual can withstand (Randall & Tamayer, 1998).

The rapid growth of industries, especially the automotive industry, and its development over the past decades indicates that Iran is moving from a semi-industrial economy to an industrial economy. Attention to production and its productivity can direct it along a right path while accelerating its growth and industrial development. Therefore, the companies' familiarity with the concepts of productivity and its increasing solutions is emphasized. Therefore, it can be said that the degree of development of the industries depends considerably on the optimal utilization of the resources and production facilities. Hence, its productivity and continual increase in companies have a special position. In this way, it should be paid more attention to productivity and continuous increase in companies for the growth and development of industries. A survey of companies shows that attention to productivity in different companies is taking place in different forms. Of course, given the companies' requirements and the natural management policies, it should be acted to a variety of ways and in line with the status quo. Therefore, in this paper, it has been tried to consider the variables affecting productivity while referring to the main concepts of productivity. And it is seeking to answer the question whether empowerment and reducing stress can be effective in increasing productivity?

The purpose of this paper is to explain the relationship between empowerment and productivity by mediating job stress. It is also possible to challenge the explanation of the relationship between empowerment components and job stress, explanation of the relationship between job stress and productivity components, explanation of the



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relationship between empowerment components with productivity, prediction of productivity with job stress, prediction of productivity with empowerment, prediction of empowerment with job stress, explanation of the relationship between empowerment and productivity by mediating of job stress.

In this paper, the issue of empowerment is introduced, which means a score that a person obtains in the scale of empowerment. This scale has 38 items in which six dimensions of empowerment are consulted and ultimately measured. On this scale, the factor of basis, professional, the factor of self-efficacy, the factor of affecting, the factor of decision and the factor of autonomy are measured.

The next issue in this research is productivity. Here, productivity is the score that a person obtains from the Job Productivity Questionnaire of ACHIEVE. The questionnaire includes 7 items that cover questions such as work power, clarity, or perception of role, organizational support, willingness or motivation, feedback or evaluation, credibility and environmental compatibility.

The next important parameter is job stress. In this research, job stress is the score that a person obtains from the Dius Stress Questionnaire, Robinsomak Kee, in 1991, which contains 20 items. This questionnaire examines and measures the symptoms of job stress over the past three months to now.

### **2. BACKGROUND**

Habibollah Hassanzadeh, Naser Shirbegi, Houshang Olizadeh (2010), the study of the job stress and productivity of employees of Kordestan gas company, there is a significant relationship between gender, marital status, employment status, place of employment and job stress but there wasn't observed a significant relationship between education status, age, work experience and job stress. There is a significant relationship between education level and the city of service and productivity, and there is not a significant relationship between gender, marital status, age, work experience and productivity. The average job stress of the employees is 118.27 and their average productivity is 66.89. The results of this study show that job stress has an important role in reducing productivity in the workplace. Based on this, identifying environmental stressors and operating strategies to reduce these stresses are among the most important factors that can be effective in this way.



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Sanaz Cheraghi and Elaheh Hashem Beigi (2011) studied the relationship between mental health and organizational commitment with the productivity of employees of the Agricultural Jihad Department. The findings of the research showed that there is a significant relationship between mental health and organizational commitment with productivity, there is a significant relationship between dimensions of mental health and dimensions of productivity.

Seyfollah Aghajani (2011) has examined the relationship between type C personality and strategies coping with stress among students of Ardebil universities. Students were selected through random sampling. For data collection, the Eysenck type C personality test and the Lazarus Coping Questionnaire were used. The following results were obtained.

There was a significant difference between the scores in the type C personality and strategies coping with stress (emotion-centered) in students prone to C cancer. There was no significant difference in problem-centered mechanisms. This means that students prone to cancer have used more emotion-centered mechanisms than girls non-prone to cancer, but it was not observed in problem-centered mechanisms, which means that students prone to cancer have used more emotion-centered mechanisms than students non-prone to cancer. But they have used in a same amount in problem-centered mechanisms.

There is a significant difference between the average scores of female students prone to cancer and non-prone to cancers in the emotion-centered mechanism by gender adjustment and there is a significant difference in the problem-centered mechanisms at the level of  $\alpha=5\%$ , but there isn't a significant difference at the level of  $\alpha=1\%$ . There was no significant difference between the average scores of male students prone to cancer and non-prone to cancer in problem-centered mechanisms. In the emotion-centered and problem-centered mechanisms, the average scores of male students of type C personality (prone to cancer) were not significantly different from female students of type C personality (prone to cancer), and both groups had emotion-centered and problem-centered mechanisms and there was no significant difference between them. It can be said that there is no obvious difference in gender. Therefore, it can be acknowledged that students prone to cancers when dealing with stressors use more emotion-centered mechanisms than problem-centered mechanisms; therefore, considering the rejection or acceptance of assumptions in this



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research, the results can be generalized to the statistical population. For data analysis, one way ANOVA, Scheffe test and T-test (average difference of independent groups) were used.

Millstine (2001), in examining the organizational stresses on teachers, found that stress is emotional first, and then the behavioral and physical form, issues such as the lack of facilities, students' motivation and disciplinary problems have the most rank in terms of stress in the educational system. Classroom issues create more stress than the organization itself, and there was no significant difference between gender and age in terms of stress. However, less experienced teachers reported more stress than experienced individuals which may be due to their low level of experience (Foroughi and Esfahani, 2012 and Zareinejad et al., 2014). May Clayton (2002), in examining the stress of primary and secondary teachers found that their stressors are the school atmosphere, the high level of teacher work, undesirable communication in the work environment, the abnormal behavior of many students, and changes in the education system, lack of familiarity with the goals of new programs, problems of individual teaching, lack of professional assistance, descending social status of teacher, and lack of material privileges. (Rajab Pour, 2000)

Kriaco and Sutcliffe (2002) identified four main factors of teacher stress, student behavior, unfavorable conditions of work, time pressure, and unfavorable conditions of each school. Palis (2005), in his research on 244 teachers who were irregular in terms of behavior, found that variables such as school environment, problems of job path and heavy work creates more stress than direct relationships with students. Factors such as fatigue, failure, and the transmission of negative cases of outside life to the classroom are continuously effective in creating stress. (Rajab Pour, 2000)

### **3. METHODOLOGY**

The research method is a descriptive - correlation type. The statistical population in this study included 120 employees-all employed- at Saipa Company in Darab, who worked in the morning and evening in 2013 and were selected by census. The Job Stress Questionnaire and its resource was prepared by "Dius, Robinsomak Kee" in 1991. This is a questionnaire for measuring the symptoms of job stress that contains 20 materials. This questionnaire examines and measures the symptoms of job stress over the past three months.



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In order to score this questionnaire, score 4 is dedicated to the item of always, score 3 to the item of most of the time, score 2 to the item of sometimes, score 1 to the item of rarely, and score 0 to the item of never.

Validity and reliability of the questionnaire in Iran was performed by Sotoudeh (2002). The validity of the questionnaire was evaluated using the coefficient of concurrent validity (criterion validity). And 0.70 was obtained for the questionnaire. The reliability coefficients of the questionnaire were calculated using Cronbach's alpha method. This amount was 0.86 for the job stress questionnaire. It should be noted that (Daneshvari 2010) recalculated the reliability coefficient of job stress questionnaire that this coefficient was obtained 0.94 by using Cronbach's alpha coefficient for job stress questionnaire.

**Productivity Questionnaire of ACHIVE**

The questionnaire was designed by Harchi and Blanchard and Gold by the help of Kodiran in determining the cause of functional problems in change strategies to solve these problems.

This questionnaire has 7 items that each item includes the following questions.

Working power 1, 2, 3

The clarity or perception of the role of 6, 7, 8

Organizational support 9, 10, 11, 12, 13, 20, 22, 23, 24

Inclination or motivation 14, 19, 18, 17, 16, 15

Working power 1, 2, 3

Clarity or perception of the role 6, 7, 8

Organizational support 9, 10, 11, 12, 13, 20, 22, 23, 24

Inclination or motivation 14, 19, 18, 17, 16, 15

Feedback or Evaluation 25, 22, 21, 5, 4

Validity 30, 29, 28, 27, 28

Environmental compatibility 32, 31

The validity of this questionnaire was reported 0.83 at Cronbach's alpha level by Moshabaki in 2005 and 0.89 by Zahra Haghghat Jou in 2006. The reliability of this test at Cronbach's alpha level was 0.94. Also, the validity of this test was reported 0.78 by



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Morad Ali Zadeh in 2001, which is consistent with Robbins productivity test and Koniko productivity test 0.76.

Information related to indicators includes 32 questions based on Likert scale, and consisted the options of very low (1), low (2), somewhat (3), high (4), very high (5).

A. If the calculated score is between 128 and 160, the employee's productivity is very high

B. If the calculated score is 127-96, the employee's productivity is high

C. If the calculated score is between 95-64, the employee's productivity is normal.

D. If the calculated score is between 63 and lower, the employee's productivity is low

In the empowerment questionnaire, the Likert scale is used to measure the results. Since all the questions of questionnaire are positive, the option of very low (1), low (2), moderate (3) high (4), very high (5).

In the empowerment questionnaire, questions 10-1 measure (field of education), questions 17-11 (field of motivation), questions 23-18 (field of culture), and questions 30-24 (field of participation).

### 4. FINDINGS

As previously mentioned, in this study, three parameters of job stress, empowerment and productivity were studied that presented in Tables 1 to 3, respectively.

**Table 1: Average and standard deviation of job stress and its components**

Variables	Average	SD
job stress	87.92	10.71
Role	17.11	2.21
Communication	6.91	2.4
Support of authorities	12.73	3.4
Support of colleagues	11.49	2.28
Control	13.89	3.77
Demand	15.81	3.71
Variations	7.81	1.96

**Table 2: Average and standard deviation of empowerment and its components**

Variables	Average	SD
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Total empowerment	107.18	22.47
Education	35.66	7.77
Motivation	27.23	6.33
Culture	20.9	5.53
Participation	23.37	5.76

**Table 3: Average and standard deviation of productivity and its components**

Variables	Average	SD
Work power	11.46	1.95
Clarity or perception of role	11.01	1.89
Organizational support	29.84	6.71
Motivation	21.61	3.46
Feedback or assessment	19.05	3.42
Validity	20	3.73
Environmental compatibility	1.45	8.53
Productivity	118.34	16.92

**Inferential Findings**

The first hypothesis: empowerment and its components have a significant relationship with job stress.

To test this hypothesis, Pearson correlation coefficient was used and its results are reported in Table 4.

**Table 4. Correlation coefficient between empowerment and its components with job stress**

empowerment and its components	Correlation with job stress	Significant level
Total empowerment	0.388	0.0001





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Education	0.361	0.0001
Motivation	0.263	0.0001
Culture	0.390	0.0001
Participation	0.361	0.0001

As it was observed, the correlation coefficient between total empowerment and job stress is 0.38 (The reason for being positive is that the higher score in the job stress questionnaire indicates less job stress) which is significant at the significant level of 0.0001, it means that there is a significant and inverse relationship between total empowerment and job stress. Also, all the components of total empowerment have a significant and inverse relationship with job stress. Culture has the highest correlation with job stress and motivation has the least correlation with job stress which is in line with the research of Jamshid Nejad 2009.

The second hypothesis: there is a significant relationship between components of empowerment and productivity.

To test this hypothesis, Pearson correlation coefficient was used and its results are reported in Table 5.

**Table 5. Correlation coefficient between the components of empowerment and productivity**

Components of empowerment	Correlation coefficient with productivity	Significant level
Total empowerment	0.403	0.0001
Education	0.387	0.0001
Motivation	0.261	0.006
Culture	0.463	0.0001
Participation	0.317	0.001

As it was observed, the correlation coefficient between total empowerment and productivity is 0.403 which is significant at the significant level of 0.0001; it means that there is a significant and direct relationship between empowerment and productivity. Also, all the components of empowerment have a significant and direct relationship with productivity. Culture has the highest direct correlation with productivity and motivation has the least correlation with productivity.



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The third hypothesis: there is a significant relationship between components of job stress and productivity. Table 6 shows the correlation coefficients between components of job stress and productivity.

**Table 6. Correlation coefficient between the components of job stress and productivity**

Quality of life and its components	Correlation coefficient with productivity	Significant level
job stress	0.409	0.0001
Role	0.286	0.002
Communication	-0.195	0.04
Support of authorities	0.503	0.0001
Support of colleagues	0.379	0.0001
Control	0.217	0.022
Demand	-0.139	0.14
Variations	0.206	0.03

As it was observed, the correlation coefficient between job stress and productivity is 0.409 (The reason for being positive is that the higher score in the job stress questionnaire indicates less job stress) which is significant at the significant level of 0.0001, it means that there is a significant and inverse relationship between job stress and productivity. Also, except the component of communication that has a direct relation with productivity and the component of demand that not has a significant relation with productivity, all the components of job stress have a significant and inverse relationship with productivity. Support of authorities has the highest correlation with productivity. The result of this hypothesis is consistent with the results of researches of Habibollah Hasanzadeh, Naser Shirbegi, Houshang Oliuzadeh (2010) and Zeynab Rasouli (2011).

The fourth hypothesis: the components of empowerment predict job stress. In order to study this hypothesis, multiple regression analysis was used with simultaneous logon method, the results of which are reported in Table 7.



**Table 7. Multiple regression analysis with simultaneous logon of components of empowerment on job stress**

Components of empowerment	R	$R^2$	F	Significant level F	Beta	t	Significant level t	Fix value
Education	0.426	0.182	5.88	0.0001	0.218	1.65	0.101	67.73
Motivation					-0.169	1.15	0.25	
Culture					0.233	1.44	0.152	
Participation					0.158	0.94	0.34	

As it was observed, the multiplicity correlation coefficient (R) between empowerment components and job stress is 0.426 and the coefficient of determination ( $R^2$ ) is equal to /18. This means that the empowerment components can predict 18% of the variations of variable of job stress, since F is significant at  $P < 0.0001$  level. Therefore, it is concluded that empowerment components can predict job stress significantly.

Regarding the coefficients of regression (Beta), it can be concluded that the component of culture has the most direct effect on job stress and the participation component has the least effect on job stress. Also, according to the values of t, it can be concluded that none of the components can predict job stress alone and with control of other components.

The fifth hypothesis: Empowerment components can predict productivity

To investigate this hypothesis, multiple regression analysis with simultaneous logon method was used and the results are reported in Table 8.

**Table 8: Multiple regression analysis with simultaneous logon of empowerment components on productivity**

Components of empowerment	R	$R^2$	F	Significant level F	Beta	t	Significant level t	Fix value
Education	0.501	0.251	8.86	0.0001	0.230	1.83	0.07	88.1
Motivation					-0.172	-1.22	0.22	
Culture					0.546	3.53	0.001	
Participation					-0.147	-0.916	0.36	

As it was observed, the multiplicity correlation coefficient (R) between empowerment components and productivity is 0.501 and the coefficient of determination ( $R^2$ ) is equal



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to /25. This means that the empowerment components can predict 25% of the variations of variable of job stress, since F is significant at  $P < 0.0001$  level. Therefore, it is concluded that empowerment components can predict productivity significantly.

Regarding the coefficients of regression (Beta), it can be concluded that the component of culture has the most direct effect on productivity and the participation component has the least effect on productivity. Also, according to the values of t, it can be concluded that only the component of culture can predict productivity alone and with control of other components.

The sixth hypothesis: The components of stress can predict productivity

To investigate this hypothesis, multiple regression analysis with simultaneous logon method was used and the results are reported in Table 9.

**Table 9: Multiple regression analysis with simultaneous logon of components of job stress on productivity**

Components of job stress	R	$R^2$	F	Significant level F	Beta	t	Significant level t	Fix value
Role	0.57	0.325	7.07	0.0001	0.153	1.76	0.08	
Communication					-0.096	-1.12	0.26	
Support of authorities					0.416	3.97	0.0001	
Support of colleagues					0.072	0.7	0.48	
Control					0.095	1.07	0.28	
Demand					-0.144	-1.74	0.08	
Variations					0.071	0.74	0.45	

As it was observed, the multiplicity correlation coefficient (R) between components of job stress and productivity is 0.57 and the coefficient of determination ( $R^2$ ) is equal to /33. This means that the components of job stress can predict 33% of the variations of variable of productivity, since F is significant at  $P < 0.0001$  level. Therefore, it is concluded that the dimensions of job stress can predict productivity significantly.

Regarding the coefficients of regression (Beta), it can be concluded that the component of support of authorities has direct effect on productivity and the component of variations has the least effect on productivity. Also, according to the values of t, it can be concluded



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that only the component of support of authorities can predict productivity alone and with control of other components.

The main hypothesis: job stress plays a mediating role between the components of empowerment and productivity

In this hypothesis, to investigate the mediating role of job stress in the relationship between empowerment components and productivity, hierarchy regression analysis method using Baron and Kenny method was used.

In the first stage (the first block), the prediction variables of empowerment components and the productivity criterion variable entered the equation, and then in the second block, the mediating variable of the job stress entered into the equation, the results of which are reported in Table 10.

**Table 10. The Results of Hierarchy Regression Analysis**

Blocks	Variables entered the equation	R	R <sup>2</sup>	R change	F	Significant level F	Beta	Significant level
First	Education	0.501	0.251	-----	8.86	0.0001	0.230	0.07
	Motivation						-0.172	0.22
	Culture						0.546	0.001
	Participation						-0.147	0.36
Second	Education	0.552	0.305	0.054	9.22	0.0001	0.174	0.161
	Motivation						-0.129	0.34
	Culture						0.486	0.002
	Participation						-0.188	0.23
	Job stress						0.258	0.005

In this hypothesis, to investigate the mediating role of job stress in the relationship between empowerment components and productivity, hierarchy regression analysis method using Baron and Kenny method was used.

In the first stage (the first block), the prediction variables of empowerment components and the productivity criterion variable entered the equation, and then in the second block, the mediating variable of the job stress entered into the equation.



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As it is observed, in the first block, the value of the square R is 0.251 and in the second block, it is 0.305, which means that the value of the square R is 0.054, which is significant.

As it is observed, job stress plays a significant mediating role for empowerment and productivity variables (beta is equal to 0.258, which is significant at the level of 0.005). In this sense, job stress plays a significant mediating role in the relationship between empowerment and productivity. So this hypothesis is confirmed. Therefore, the main hypothesis of the research is confirmed.

### **4. RESULT**

The results of this study indicate that job stress has an important effect in reducing productivity in the workplace. Based on this, identifying the stressors of the environment and operating the strategies to reduce these stresses is one of the most important factors that can be effective in this way. The "Attitude of Empowerment" has been entered into the organization and management literature since 1891. The basic philosophy of empowerment is the achievement of participatory management and the provision of assigning responsibility to groups and individuals. In this way, employees' ability and authority in cooperation, participation and making decision increases. If employees feel that their work belongs to them, their responsibility and initiative will be greater. Therefore, the effectiveness and efficiency of employees within the organization also increases. Therefore, managers of organizations are required to present and implement applications to reduce stress of employees in order to help to increase the empowerment of employees to increase productivity. Reducing job stress in the employees leads to improve job quality of employees and thus reduces all factors that reduce productivity.

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