

INVESTIGATION THE RELATIONSHIP BETWEEN JOB TRAITS AND JOB STRESS (Case study: Shahed University staff and professors)

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ABSTRACT

*Stress is a highly serious problem in today world which endangers physical and mental health of individuals. Today organization is a location seriously influenced by stress. As a calamity, stress in organizations weakens and destroys operations and also can promote the organization. There are paramount evidences on the destructive effects of job stress on physical and mental health as well as organizational productivity. Job or job traits are factors that highly impact on stress at organization. **In present probe, we study the impacts of job traits on job stress by using Hackman and Oldham job traits model.** Below, the relationship between job traits and stress was investigated by two questionnaires (job traits and job stress). Research population in Shahed University's comprehensive plan with 123 subjects (45 professors and 78 employees) who are selected as available among statistical population. For Information analysis we used descriptive & inferential statistics (Correlation Coefficient). The results are as following: There is a positive and significant relationship between job major aspects and job stress (At Confidence Interval of 90%) of professors while there is no significant and positive relationship between job major aspects and job stress of employees.*

Keywords: *job major aspects, Job traits, job stress, organization, Hackman and Oldham model.*

INTRODUCTION

Job related stress is, *inter alia*, the most critical issues of working life and health in today complicated industrial world and is considered as one of the most destructive factors compared to human resources threats (Grayson et al, 2008, P. 1350). A few people are capable to avoid or fight it (Al-Fudail, et al, 2008, p. 1104). Stress is a multidimensional factor (job stress, mental stress, and burnout) which can impact on various aspects of individual's performance (Leung, Chan, Dongyu, 2011: 2). Along with physical, chemical, ergonomic and biological threats, stress is the fifth major danger in workplaces and some organizational behavior connoisseurs have named job-related stress as "century disease". Job or job traits, *inter alia*, impacts on job stress seriously (Karam, 2011: 3). Oltmanns and Emery (1998) categorized jobs based on two benchmarks: mental requirements and controlling on decision-making. Accordingly, training jobs have a high level of control in decision – making which includes lessons, training content and training process (i.e. university professors). Affecting factors on university professors' job mental pressure include extra workload, improper training leadership, improper working relations and lack of job security (Beheshti, 1991). Gmelch and Burns studied the resources of mental pressure and job pressure of professors in Washington universities. Stressors include role-based stress, task-based stress, clash-based stress, incentive – based stress and professional identity (Gmelch & Burns, 1994). In recent years, teachers' and professors' job stress that are attributable to employment and healthy problems are highly considered. For example, the statistics of job stress related suicide among teachers and professors is changed to a general problem (Jin et al, 2008, p. 357).

In one hand, stress impacts on teachers and professors both physically and mentally and such impact is transferred to pupils and students.

On the other hand, in HR management, employees' health is highly important since a healthy person is one who is compatible with his/her surrounding environment including family, social and business environments. Such a person attempts to create a pleasure environment for himself/herself (Abtahi, 2006, P. 349). Among various models and methods, present paper has selected Hackman & Oldham job traits model to study the impacts of job major aspects on job stress.

RESEARCH CONCEPTUAL BASICS

Job stress

Before defining stress, one should note that job stress differs from other life stresses (Gaving, 2007, p. 625). The lack of a person's effectiveness on his/her job activities relates to higher stress levels (Salo, Allwood, 2011: 1). Job stress is created by some factors (Nasurdin et al, 2006, p. 116). Robbins divides them into three environmental, organizational and individual factors. They emerge as failure, anxiety and mental conflicts (Robbins, 2005, p. 953). Job stress is a term used to describe workplace related stresses (Stranhan et al, 2008, p. 2). Parker and Decotiis believed that job stress is personal awareness or understanding of the result of a destructive event which is obtained from work conditions and leads into mental, physiological and behavioral reaction. Such reactions are happening in conscious and unconscious manners and the creators may be real or unreal (Nasurdin et al, 2006, p. 118). In most studies on stress, job related stress is reported as high (Gaving, 2007, 624 & Ivie, Garland, 2011: 3). For instance, stress in Britain is mentioned as the greatest affecting factor on employees' decision to leave service. It has resulted into an incremental wave of stress management in public sector (Goffey, Dugdill, Tattersall, and 2009: 2).

Russo cited Ricce who says in addition to organization, mental stress involves employees. This is not a private problem for an employee to combat against it individually, rather its destructive ramifications for organization include disturbance, interference in normal operations, low productivity. The consequences of mental stress on manpower are three times more (Ricces, 1992).

In addition to physical problems (pain in back, neck, head, heart attack and stomach ulcer (Abtahi, 2006, p. 349; Robbins, 2005, p. 950; Karamy and Gudarzi, 2003, p. 34), it brings psychological disorders and changes (more delay rate, absenteeism and employees service leave). As a result, their efficiency decreases in both qualitative and quantitative terms and the number of events and complaints would increase.

It is obvious that such employees have low morale, low motivation and very low job satisfaction. It seems that changes in behavior due to mental pressure would impact on both intra-organizational productivity and inter - organizational lifestyle (Gaving, 2007, p. 624). Also, a common issue among the members of such professions as teachers, university professors, HR experts and social workers is burnout. When someone endures extra mental pressure and the resources to mitigate such pressure are too low, such feeling is shaped (Ivie, Garland, 2001: 3). For instance, a national study on 28,000 US citizens revealed that more than 50% of them suffer burnout (Golembiewski and Munzenruder, 1998).

Job traits and Hackman & Oldham model

Motivation and job satisfaction are, *inter alia*, the discussions which take a remarkable part of the time, budget and attention of connoisseurs and managers in both theoretic and practical aspects. Methods like job turnover, job expansion, job enrichment and redesigning job indicators are some methods to promote the level of employees' motivation and job satisfaction. Each mentioned method has its own characteristics of which the redesigning job indicators has special credit due to the existence of measuring tools, existing variables in job indicators model as well as is valuable and positive ramifications (Taghdies and Jamshidi, 1997: 2).

Therefore, among various models and methods, present paper has selected Hackman & Oldham job traits model to study the impacts of job traits on job stress.

Job traits refer to various operations, functions, assignments and aspects of jobs. Some jobs are routine since their activities are modest; others are unusual; some jobs need different skills and some jobs have a limited arena; some jobs make the employees frustrated due to enforcing them to follow working trends and other jobs give more freedom to their staff. Some jobs have the highest success when are performed by a group of employees collectively and other jobs are successful when performed individually (Keshtidar, 2002).

In their study on a telecommunication company, Richard Hackman and Edward Lowler (1971) concluded that employees' job satisfaction is higher and their performance and attendance in workplace is better when they feel traits like skill diversity, task nature, independence and engaging with other further in their job (Hackman and Oldham, 1971: 259). This study paved the ground for Hackman and Oldham job traits model in 1975. Through a research, they found that employees' job satisfaction and performance increase and their turnover and

absenteeism decrease when they enjoy high levels of job traits such as skill diversity, job nature, task importance, independence and job feedback (Garg & Ratogi, 2006: 580; Rad, 1999).

Hackman and Oldham job traits model consists of three parts: (1) job major aspects including skill diversity, job nature, task importance, independence and job feedback; (2) mental conditions including the feeling of having an important job, accountability, being informed of job results; and (3) working and individual ramifications including promoting inner motivation on job qualitative performance improvement, job satisfaction promotion and mitigating job relinquish (figure 1) (Alvani, 2009: 167 – 168).

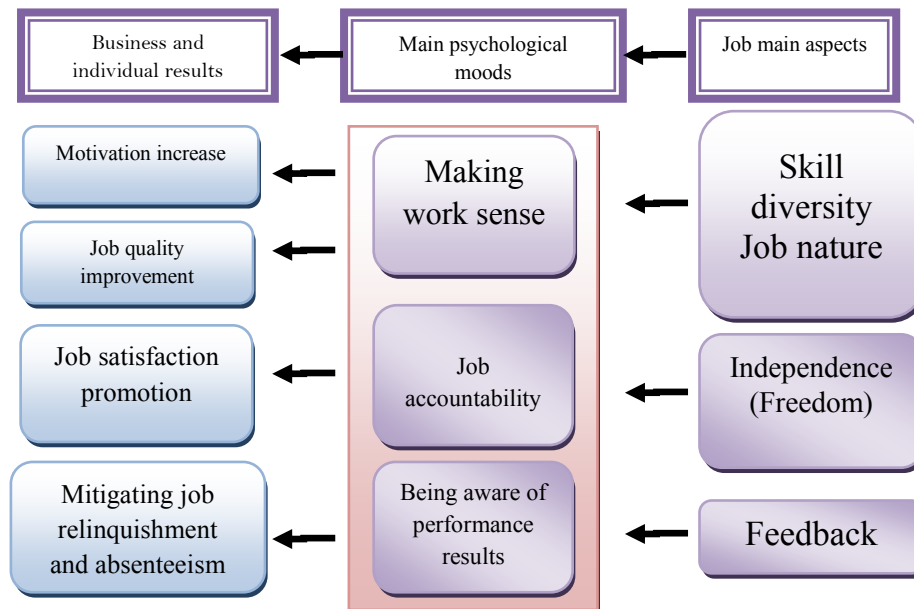


Figure 1: the relations between job main aspects, job owner's mental moods and expected results (Hackman & Oldham, 1975)

Skill diversity: it means the needs of a job to a variety of activities to perform the works. It is the degree of a job needs to varied activities which require different skills and talents (Moorhead and Griffin, 2002). Sundry activities are needed to perform a job and workers or employees should use their own skills, competencies and capabilities (Alvani, 2009: 168).

Job importance: it is the amount of job impact on personal life as well as on other individuals' jobs. Job importance depends on the rate of job impact on other individuals' life and work in the same organization or external environment (*ibid*). Job importance is to respect the life and welfare of colleagues and consumers. For instance, a plane mechanic impacts highly on human life. Therefore, such job is more important the job of an employee in post office (Mahdad, 2005; Bayat, 2007: 79).

Job nature: it is the rate to which an employee performs his/her job fully. It is a plan, unit or a part of the job which is fully certain and has a special character per se. in other word, job tasks are determined from the beginning to end in a manner by which the person has a complete picture of his/her tasks and is considered as an important part of the job (Robbins, 2002).

Independence: it means the rate that job causes the individual's independence during job planning. It is the degree of individual's freedom and independence and involvement in arranging job schedules and methods (Moorhead and Griffin, 2002). It is a job trait which gives employees a kind of authorization and monitoring on job-related decisions. It seems that such freedom has a radical impact on generating employees' responsibility feeling (Alvani, 2009: 168).

Feedback: it means the amount of activities which is necessary to acquire the results via clear and direct information on job effectiveness. It is a degree on individual's results from performed job as well as information on job effectiveness given to employee or worker directly (Rezaeian, 2008: 475).

In present model, motivational power is computed by below formula:

$$\text{Job potential motivation index} = [(diversity + nature + importance) / 3] \times independence \times feedback$$

As seen, three factors of job importance, meaningfulness and diversity can be replaced by each other and compensate the lack of each one while if job independence and feedback are not available, motivational power will fall to zero (Bayat, 2007: 79).

METHODOLOGY

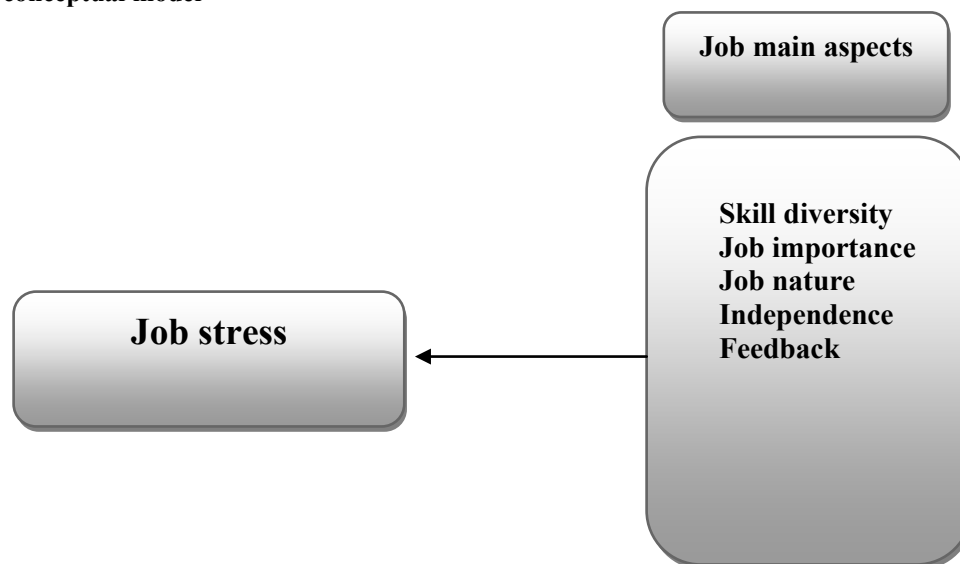
Research aims

1. Studying the rate of stress and its relationship with job traits among Shahed University professors
2. Studying the rate of stress and its relationship with job traits among Shahed University employees

Hypotheses

- 1. There is a significant relationship between professors' job major aspects and job stress.**
 - 1.1. There is a significant relationship between professors' job traits (job diversity, importance and nature) and job stress.
 - 1.2. There is a significant relationship between professors' job independence and job stress.
 - 1.3. There is a significant relationship between professors' job feedback and job stress.
- 2. There is a significant relationship between employees' job major aspects and job stress**
 - 2.1. There is a significant relationship between employees' job traits (job diversity, importance and nature) and job stress.
 - 2.2. There is a significant relationship between employees' job independence and job stress.
 - 2.3. There is a significant relationship between employees' job feedback and job stress.

Research conceptual model



Research type and method

In terms of purpose, this is an applied research and in terms of data gathering, it is a field-type survey. Among descriptive researches, this is a correlation one.

Research scope

The thematic scope of this research is to study the relationship between job major aspects and job stress. Its interval is spring 2011. Its spatial scope includes professors and employees of Shahed University master plan (Central Pardis).

Statistical population and sample

Research population includes all employees and professors at Shahed University master plan.

Sampling method and sample volume

With regard to statistical population and using Morgan table, a sample with 123 subjects (45 professors and 78 employees) was randomly selected among statistical population.

Research tool

In present study, following questionnaires are used:

1. Job traits (job major aspects) questionnaire:

It measures dependent variable namely job major aspects (main aspects of job including job diversity, nature, importance, independence and feedback). It is devised based on Hackman and Oldham model with 14 items as 7 items for main job aspects, 3 items for independence and 4 items on feedback. Based on a research by Ebrahimpour (2010), 25 questionnaires were distributed and gathered in statistical population whose Chronbach's alpha ratio was 0.858.

2. Job stress questionnaire:

This questionnaire was devised by Vanderdooph et al in the Netherlands. It was translated to Farsi by a job medical expert Dr. Shahriari in 2000 and its reliability and validity is measured among Tehran fire fighters. It includes 30 items and its total score measures job stress.

Elites' opinions were used to confirm the validity of the questionnaire.

Analyzing research data and findings

The results of descriptive statistics are obtained by SPSS software.

Table 3: the frequency of demographical variables

%	Frequency	
Gender (professors)		
95.5	43	Male
4.5	2	Female
Scientific degree		
6.50	4.5	Assistant professor
93.50	42	Associate professor
Gender (employees)		
64.10	50	Male
35.90	28	Female
Job record		
29	23	1 – 10 years
55	42	11 – 20 years
6	5	20 – 30 years
10	8	N/A

In analytical statistics section, research hypotheses are tested by SPSS software and Pearson's correlation coefficient. The results are shown in below table.

The figures allotted to studied variables are real numbers between 1 through 5 (based on Likert's five – item scale). To test research hypotheses, correlation coefficient is used and since the hypotheses have a certain direction, correlation test is single domain test.

Pearson's correlation coefficient is utilized to study the linear relationship between studied quantitative variables. These coefficients are between +1 and -1 and when their significance is proved in considered confidence level, it shows the relations between studied variables. When correlation coefficient is positive, it shows a positive (direct) relationship and when such coefficient is negative, it shows a negative (reversed) relationship. When the severity of correlation is higher, it is closer to +1 or -1.

Correlation coefficient	Status	Sig	Hypothesis	Population
0/254	Confirmed in 90% level	0.092	Major	Professors
0/410	Confirmed	0.005	The 1 st minor	
	Rejected	0.785	The 2 nd minor	
	Rejected	0.552	The 3 rd minor	
	Rejected	0.236	Major	Employees
	Rejected	0.398	The 1 st minor	
	Rejected	0.322	The 2 nd minor	
	Rejected	0.631	The 3 rd minor	

Step – by – step multivariable regression

In this section, step – by – step multivariable regression by SPSS software is used to determine a linear model between research variables. In step – by – step regression, SPSS starts with a statistic with higher t and inserts it into the model and keeps on until there remains no variable whose t statistic is in significant level. Therefore, the final model may not embrace all inserted variables into SPSS.

In present study, the results of linear model estimation between the rate of stress and job stressors (job aspects, independence and feedback) among professors and employees are as follows:

(a) Regression model in professors' selected sample

Studying software outputs indicate that all variables are inserted into model. The sort of their insertion is:

1. Feedback
2. Job aspects
3. Independence

The overview of obtained regression model is outline in below table:

Standard deviation estimation	Mitigated determination ratio	R ²	R
0.16130	0.099	0.160	0.400

Drawn table for obtained regression model from software output is as follow:

β	Standard deviation b	B	Inserted variable
0.405	0.274	1.794	Fixed rate
-0.175	0.070	0.186	Job traits
0.214	0.034	-0.039	independence
	0.061	0.086	feedback

Therefore, the final model is:

$$\text{professors' stress} = 1.794 + 0.186 \times (\text{job traits score}) - 0.039 \times (\text{independence score}) + 0.086 \times (\text{Feedback score})$$

Regression model in employees' selected sample

Studying software outputs indicate that no variable is inserted into model. It means that the stress of selected employees sample can't be estimated as a linear function of job stressors.

In the meantime, comparing the average scores of professors and employees on studied variables by using T test for independent groups showed that:

1. There is significant difference between job stress rates of studied professors and employees (sig=0/002).
2. There is significant difference between job traits (total score of the 1st questionnaire: Skill diversity, Job importance, Job nature) of studied professors and employees (sig=0/004).

CONCLUSION

The main purpose of present paper is to study the relationship between job major aspects and job stress. Job traits include skill diversity, job nature, job importance, independence and feedback. Research findings indicate that there is a significant relationship between job major aspects and job stress among professors (At Confidence Interval of 90%) ($R = 0.254$) while there is no significant relationship between employees.

Studying the findings based on research minor hypotheses

1. Analysis results indicate that there is positive and significant relationship between professors' job major aspects and job stress. It means that job major aspects play a vital role in job stress and one can control job-related stress by designing the job correctly. However, a significant relationship is not found among employees in terms of these two variables. Perhaps, the reason is their managerial style in which they do not trust employees and manage them by a directive style.
2. The first minor hypothesis shows that there is positive and significant relationship between professors' job traits and job stress. The results indicate that there is a positive and significant relationship between job stress and job traits (skill diversity, job nature, job importance ($R = 0.410$)). By identifying those job aspects which generate the highest stress, one can decrease job-related stress or can create a rational stress by enhancing those traits that mitigate stress. In the meantime, one can design jobs to which staff and professors are more tended. However, there was no significant relationship between job main traits and stress among employees and our hypothesis was not confirmed. It shows the lack of attention to jobs correct design since job main traits do not impact on their stress.
3. The second minor hypothesis shows that there is no significant relationship between independence and job stress among staff. This is not compatible to previous studies. The main reason is managers' directive style since they do not trust their staff and refuse granting job independence to them. It de-motivates the staff and prevents their growth in job development path.
4. The third minor hypothesis shows that there is no significant relationship between job feedback and job stress of both employees and professors. This is an interesting point since previous studies on stress had shown that feedback is a variable which mitigates the stress and improves the performance. Feedback is an

important issue in organizational communications and the lack of feedback causes communicational problems. Perhaps in present study, the reasons are individuals' unfamiliarity with proper methods of giving feedback, the lack of proper climate for feedback and fear of giving feedback.

Also

Comparing job stress of university staff and professors shows that there is significant difference between their job stresses.

There is significant difference between job traits of studied professors and employees.

Recommendations

According to achieved results and by considering job major aspects as an independent variable on job stress, following recommendations are provided:

Recommendations on the basis of job main aspects:

Main job aspects were addressed in terms of five traits: skill diversity, job nature, job importance, independence and feedback. Based on the positive impact of such impacts on organizational citizenship behavior, it is recommended to redesign job traits model so that:

Skill diversity means job requirement to diversified operations whose necessity is various skills and talents. Job importance means the impact of job on others' life or work in the same organization of external environment. Job tasks are determined in a manner from the beginning to end that the individual can have a complete picture of his/her functions and considers himself/herself as an important part of the job. Independence means the degree of freedom and authorization in working schedules. Feedback means being aware of job impact on organizational performance (Tooseriand, 2002). Therefore, it is recommended to allow people to use their skills, competencies and capabilities. The job should be meaningful so it causes that the person feels accountability. It paves the ground for such person to be aware of his/her job results and their impacts on organizational performance. It means that studied organization should redesign its jobs by using provided model in this paper. Jobs should possess suitable level of stress and can mitigate de-motivation among personnel and professors and make them hopeful to growth and progress in their job path.

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