Studying the Relation of Job stress with Job satisfaction and Organizational Productivity among the Telecommunications Employees in Lorestan Province

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Abstract

Background- the present paper was conducted to study the relation of job stress with job satisfaction and organizational productivity among the Telecommunications employees in Lorestan province.

Method- it is intended in this paper to offer strategies to confront job stress and increase job satisfaction and organizational productivity for managers of organizations in Iran besides studying various concepts of job stress, job satisfaction and organizational productivity.

Findings- research findings indicate there is a direct relationship between job stress and organizational productivity, job satisfaction and organizational productivity and job stress and job satisfaction.
**Conclusion**

- Analysis of research hypotheses illustrate there exists a direct relationship among research variables. As managers intend to decrease job stress among the employees and increase job satisfaction and organizational productivity it is suggested to utilize the represented strategies in this paper to reach their purpose.

**Key terms:** JOB STRESS, JOB SATISFACTION, ORGANIZATIONAL PRODUCTIVITY

**Introduction**

Previously it was thought that satisfying needs of people decreases resources and possibilities of the organization but today this theory has been excluded totally. Now experts believe if real needs of employees are not perceived and valued accurately, productivity is decreased in the organization because interest and positive attitude towards job are led to more work attempt and thus reduction of expenses. On the other hand despite what the occupation of people is, they have attitudes and feelings with regard to their job. They might content or discontent from some aspects of their work and have a positive or negative opinion regarding the favorability of what they do. In spite of financing, job can satisfy some basic needs of humans such as mental and physical mobility, social contact, self-esteem, trust and capability. However, it can be the major source of stress too. Today the most important purpose of each organization is to reach the highest possible level of productivity or optimal productivity. Efficient factors in productivity are capital, tools, course of action and human force. Undoubtedly, proficient and efficient human force is one of the most important tools to achieve purposes of the organization, since it plays an important role in decreasing or increasing of organizational productivity. It means if an organization has the highest capital and the best technology and possibilities but lacks productive and motivated human force, it won't reach its purposes. Given to the above mentioned issues, the researcher intended to find job satisfaction level and its relation with job stress and organizational productivity in a group of Telecommunications employees in Lorestan province.
Research Literature

Concept of stress

The old term distress has been converted into the common term stress due to omission. Our strategy must be towards minimization of negative stress and maximization of positive stress. Generally tension or mental pressure is called stress. In medical terminology it indicates increased pressure and tension in physical system and structure, the same high physical and mental readiness that is necessary to deal with intense and critical situations. Stress in physiology has been defined as internal reactions of body against unfavorable physiological effects like extreme cold and heat, difficulty and distress, poverty, damage, pain, infection and severe poisoning, etc (Berzwinsky, 1992:772).

As a mental and psychical phenomenon stress is a state that most of us experience in our daily life either in family or in society and work place and this experience is led to positive or negative results (Stein, 2000:9).

Types of stress

Generally there are two kinds of stress (Moghimi, 2007: 76):

A) Live, useful and benign stress: it is a favorable stress, positive feelings of a person like encouragement because of proper performing of a task, creating a new solution or discussion to achieve a favorable agreement.

B) Destructive, harmful and malignant stress: a kind of stress that is unfavorable and harmful. Malignant stress is highly focused in theoretical subjects.

Stages of stress

Human's body always shows a reaction against stressful factors that is performed in three stages. These stages that include alarm, resistance and exhaustion are called general adaptation.

1- Alarm stage: it occurs when general balance of body is disturbed. Mind prepares itself for a response that is called run away syndrome by receiving the stressful factor. These reactions stimulate physical reactions arising from stress like sclerosis, stomach spasm, increased heart beat, tongue dryness, palm sweating and numb fingertips.
2- **Resistance stage**: Body reaction in this stage to the stimulant is in the form of increased power, resistance, tolerance and accuracy of senses. Harmonic secretions in this stage are led to unsuitable reactions. This stage is finished just after giving the appropriate response to the stimulant factor and returning to normal status. If the stressful factor remains permanently, it is led to the third stage automatically, i.e. discharge stage.

3- **Exhaustion stage**: Energy has been finished in this stage and the person should rest. If a person does not learn how to deal with stress properly, he/she will reach discharge stage helplessly. It is in this stage that stress damages stomach, heart, blood pressure, nerves and joints. Fortunately, if proper methods of dealing with stress are used as early as possible, many effects of stress are improved totally or relatively and fewer problems remain (Ghasemzade, 1997:30).

**Concept and definitions of job stress**

Job stress could be regarded as accumulation of stressful factors and job-related situations that most people agree it is stressful. For example, one of the job related stressful situations is when an employee or worker is exposed to high pressures or demands in the work environment from one side and has a limited time to satisfy such needs from the other side (Alavi, 1993: 16).

In other words, job stress is a stress that a certain person is exposed to in a certain job. Many points are hidden in this definition: to what extent the employed person has experience (he/she is proficient or novice), how his/her strengths and weaknesses are in confronting with the current conditions and which kind of personality he/she shows at the work environment.

Job stress is harmful physical and mental reaction that could affect health of the labor force and has negative consequences. It is created when job needs are not proportional with abilities, current possibilities and needs of people (Dadvar, 2006: 19).

Hith (1985) believes job stress generally happens when physiological, behavioral and mental needs are not obtained easily and employees are under pressure. On the other hand, it must be considered that all kinds of stress could not be controlled by the management such as family or financial issues of an employee.
and managers can not control this kind of stress but the employee brings such stresses to the work place.

Beer and Newman (1987) defined job stress as conditions that are created due to the interaction among people and their jobs and is accompanied by changes in them which keep them away from their normal performance. Cooper believes that researches about stress must be focused on job stress since numerous group of people work outside the house (Hart, 1983: 11).

**Job stressful factors**

Borumand (1995) believes several factors could be led to job stress. These factors are classified as below:

1- Extra-organizational stressful factors:

Although most analyses related to job stress factors ignore the importance of forces outside the organization, Ivanskovitch and Matson believe extra-organizational stressful factors include changes (social, technological, family, local, financial, etc) and residence conditions or culture to which an employee belongs. These factors could be led to increased favorable job stresses (Borumand, 1995: 48).

2- Organizational stress factors:

In addition to potential factors of extra-organizational stress, factors inside the organization could create job stress that include:

A) Policies: inappropriate assessment system, inequality of rights and benefits of equal individuals, inflexible rules, vague instructions, unnecessary movements and unreal job descriptions

B) Structures: concentration in decision-making and lack of participation, few opportunity for progress, awkward bureaucratic ceremonies, excessive professionalism and line and staff conflicts

C) Objective conditions: crowding and lack of a private working place, high cold, heat and noise, existence of security dangers and insufficient light

D) Stages and processes: weak relations, insufficient feedback, ambiguous and opposite purposes, inaccurate and deficient criterions for performance assessment and inadequate information
3- Group stress factors:
Group stress factors include the following cases: A) group incoherence  
B) lack of social support
4- Individual stress factors:
Performance, responsibility for others, technical problems, lack of colleagues' 
support, role ambiguity, high volume of work, lack of participation in 
decision-making, unsuitable conditions of work environment, inappropriate 
assessment, role conflict and low work are regarded as individual stressful 
factors at work environment (Borumand, 1995: 50).

Concept and definitions of job satisfaction
Although job satisfaction is a personal attitude, its effects and consequences are 
very important for organizations. It enhances productivity of the individual; 
makes him/her committed towards the organization, guarantees his/her physical 
and mental health, improves his/her spirit and is satisfied with life and acquires 
new job skills quickly. Issue of job satisfaction was proposed in organizations 
after the economic stagnation in the 1950's and 1960's when most employees and 
workers were dissatisfied with their job given to the economic stagnation. This 
attracted the attention of most managers and organizations towards job 
satisfaction discussion.
Job satisfaction according to the biological theory in social psychology is 
satisfaction with regard to progress in one's interesting activity or ground. In other 
words, job satisfaction means distance among the expectations that the individual 
has from his/her career and job and what really is granted to him/her from this 
job; it is a positive or favorable feeling which contains job assessment 
consequences or experience of the individual (Newton Kenyan, 1991:6).
Job satisfaction is applied to sum of positive tendencies or feelings of people with 
regard to their jobs. It means whatever the individual's job satisfaction is high, 
he/she loves his/her job highly, satisfies his/her needs through it and as a result 
he/she will have positive feelings with regard to it (Halcous, 2010: 9). Given to 
the above issues, it can be stated "job satisfaction" means sense of contentment of 
the individual from his/her work and the pleasure of it and as a result he/she
becomes attached to the job. "Job satisfaction" is a favorable, emotional and positive state obtained from job assessment or job experiences. It is a concept that has various aspects and factors and set of them must be considered. Among these factors features of worker and employee, type of work, work environment and human relations can be referred (Don Woodman, 1996: 53).

**Effective factors on job satisfaction**

Researchers have looked for major reasons of job satisfaction in the organization for a long time. They have already been able to achieve a series of fixed factors related to job satisfaction but achieving a comprehensive experimental model has not been realized. Several factors could be referred in this regard which are more important. Porter and Steers referred to the four following factors:

1- General factors of the organization, i.e. variables that are true extensively about most employees like wage and promotion opportunities

2- Immediate factors of job environment: variables that form job groups like supervision manner, quality of relations with colleagues and work conditions

3- Content factors or actual job activities like job scope (level of variety, independence and accountability) and role resolution

4- Personal factors: characteristics that distinguish one person from the other person like age, work experience and personality (Mohammadzade & Mehruzhan, 1996: 279).

Pay equity is related to job satisfaction too. Whatever pay equity is observed more and better, job satisfaction is higher and whatever satisfaction is higher, performance of the employee is improved too. Also job satisfaction is improved by means of reward payment and encouragement. Cultural attitudes, medical services and welfare facilities are involved in increasing of job satisfaction level (George & Jones, 1999: 78).
Concept and definitions of productivity

The term productivity was applied for the first time by François Quesnay, the mathematician and economist who was an adherent of physiocracy school. He believed authority of any government is relied on increasing of productivity in the agriculture sector by proposing the economic table. Another French man in 1883 called Littere defined productivity as knowledge and technology of production. Fredrick Venislo, Taylor and Frank and Lillian Gilbert conducted studies about labor division, improving the methods and determining the standard time in order to enhance efficiency simultaneous with the beginning of scientific management movement period at the beginning of 1900 (Darvish, 2008: 39).

Productivity is maximization of utilizing the resources, human force and schemes scientifically to decrease expenses and increase employees, managers and consumers’ satisfaction. Other definitions consider human force productivity as appropriate maximized utilization of human force towards goals of the organization with the lowest time and minimum expense. According to the National Productivity Organization in Iran, productivity is an intellectual attitude towards work and life. This is similar to a culture that its purpose is to make activities more intelligent for a better and excellent life. Productivity is achieving maximum possible profit from the labor force, power, talent and human force skill, land, machine, money, equipments of time, place, etc to enhance welfare of the society so that increasing of it is considered by the clear-sighted in politics, management and economy as a necessity towards enhancement of humans' living standard and society (Darvish, 2008: 39).

Research objectives

As human force is the most important factor in each organization, it must be considered sufficiently. Human life at present is full of job stresses and for this reason identification of job stressful factors and their impact on productivity and job satisfaction are the most important purpose of this survey. Finding correlation relations among job stresses, job satisfaction and organizational productivity is not the only purpose of this paper; rather major purposes are as below:

1- Recognition of cause and effect relations and connections among job stresses and job satisfaction
2- Studying the relationship between job satisfaction level and organizational productivity
3- Studying variables of personal level and group level which adjust relations among the above factors

Research hypotheses

1- There is a relationship between job stress and job satisfaction.
2- There is a relationship between job satisfaction and productivity.
3- There is a relationship between job stress and productivity.

Conceptual model of survey

![Conceptual model](image)

Conceptual model: The relationship among job stress, job satisfaction and productivity (Halcous & Bouzinx, 2010:420)

Methodology
This survey is applied in terms of purpose because most manufacturing and service organizations especially the Telecommunications Organization in Lorestan province can achieve the essential productivity by decreasing stress and increasing job satisfaction through applying appropriate strategies in business. It is a descriptive- correlation survey in terms of research type and methodology respectively. The statistical population included all employees of the Telecommunications Organization in Lorestan province. Statistical sample consisted of a number of employees available to the researcher.
Tools of data collection

Tool of data collection was questionnaire and applied scales in previous studies were used to compile the questionnaire. It was used based on purposes and hypotheses of the survey as well as data banks related to the variables under study. Also books and English and Persian articles were applied to collect theoretical principles and research literature.

Analysis of research hypotheses

Data normality (Kolmogoroff-Smirnoff test)

In order to analyze the first hypothesis through linear regression, status of data distribution must first be examined using Kolmogoroff-Smirnoff test. Since amount of significance level in both variables is more than the error level (0.05) H0 is rejected and the hypothesis regarding normality of data distribution is accepted.

H0: data does not have normal distribution.
H1: data has normal distribution.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Error level</th>
<th>Significance level</th>
<th>Test result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job satisfaction</td>
<td>3.0125</td>
<td>0.05</td>
<td>645.0</td>
<td>Rejection of H0</td>
</tr>
<tr>
<td>Job stress</td>
<td>2.9379</td>
<td>0.05</td>
<td>773.0</td>
<td>Rejection of H0</td>
</tr>
</tbody>
</table>

Table 1- Kolmogoroff-Smirnoff test

Hypothesis 1: There is a relationship between job stress and job satisfaction.

Durbin-Watson test: independence of errors (the difference between real and predicted amounts by regression equation) from each other is one of the assumptions that is considered in regression. If this assumption is rejected and errors have correlation with each other, it is not possible to use regression. Durbin-Watson test is used to examine independence of errors from each other. Statistic of this test is in the range 0-4 and if this statistic is in the range 1.5 or 2.5, non-correlation among errors is accepted; otherwise there is correlation among errors. Therefore, Durbin-Watson test is used to confirm non-correlation.
The obtained number from Durbin-Watson test is in the range 1.5-2.5 in the above table, thus non-correlation among errors is accepted.

Variance analysis shows regression in order to examine certain existence of linear relation between two variables. Statistical hypotheses of significance test of the whole regression model are as below:

H0: there is no linear relation among variables.
H1: there is a linear relation among variables.

### Table 3- Regression variance analysis of job satisfaction against job stress

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of errors</th>
<th>Degree of freedom</th>
<th>Mean square</th>
<th>Statistic (f)</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree of changes of the dependent variable through the independent variable</td>
<td>33.174</td>
<td>1</td>
<td>33.174</td>
<td>66.778</td>
<td>0.000</td>
</tr>
<tr>
<td>Degree of changes of the dependent variable through random factors</td>
<td>108.072</td>
<td>198</td>
<td>0.546</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sum</td>
<td>141.247</td>
<td>199</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Significance level (sig) in the above table is equal to zero and less than error level (p-value< 0.05), thus the hypothesis regarding linearity of the relationship between the dependent variable of job satisfaction against job stress is confirmed.

In the below table in B column, fixed amount and coefficient of the dependent variable are illustrated respectively. Table of coefficients includes two classes of standardized and non-standardized beta coefficients. Variables' scale in non-standardized beta coefficients is not equal with each other while variables' scale in standardized beta coefficients becomes similar and it is possible to compare...
variables. Therefore, standardized coefficients are used to compare the impact of independent variable on the dependent variable.

<table>
<thead>
<tr>
<th>Model</th>
<th>Non-standardized coefficients</th>
<th>Standardized coefficients</th>
<th>Statistic (t)</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Standard error</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed amount</td>
<td>1.650</td>
<td>0.182</td>
<td>9.043</td>
<td>0.001</td>
</tr>
<tr>
<td>Job stress</td>
<td>0.464</td>
<td>0.59</td>
<td>0.485</td>
<td>7.796</td>
</tr>
</tbody>
</table>

Table 4 - Coefficients of regression equation of job satisfaction against job stress

Now if α and β are fixed amount and gradient of regression line of the statistical population respectively, testing of hypotheses could be written as below:

\[ H_0: \alpha = 0 \quad \text{and} \quad H_0: \beta = 0 \]
\[ H_1: \alpha \neq 0 \quad \text{and} \quad H_1: \beta \neq 0 \]

Since the significance level of equation test for regression coefficient and the fixed amount of zero in this output is smaller than 0.05, H0 regarding equality of regression coefficients and the fixed amount of zero is rejected and they must not be removed from the regression equation. Therefore, the single-variable model is shown as below:

\[ Y = \alpha + \beta_1 X_1 + \text{error} \]

where Y is the dependent variable (job satisfaction)
\( \beta_0 \): intercept
\( \beta_1 \): estimator of regression line's gradient
\( X_1 \): job stress

Given to the significance level for the independent variable of job stress, its presence in the model is significant.

\[ 0.182 + 0.485X_1 = \hat{y} \]

Considering the obtained regression coefficient in the above equation it can be stated that job satisfaction is changed equal to 0.485 units in lieu of one unit increase in job stress. Also H0 regarding zero amount of this coefficient will be
rejected given to the significance level (sig= 0.000<0.05) and this amount of correlation will be significant (Pierson correlation). The hypothesis is confirmed with confidence level 95%, i.e. there is a relationship between job stress and job satisfaction.

It is necessary to examine the model's goodness before testing the other two hypotheses. It means that effectiveness degree of independent variable on the dependent variable must be ensured. Therefore, chi-square statistic is used in the logistic regression method. Goodness of the model was calculated using chi-square test. Given to the obtained numbers from chi-square statistic (27.933), results reveal independent variables are effective on the dependent variable since its significance level is less than 5% and it shows a suitable goodness.

<table>
<thead>
<tr>
<th>Chi-square statistic</th>
<th>Degree of freedom</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>27.923</td>
<td>1</td>
<td>0.040</td>
</tr>
</tbody>
</table>

Table 5- Chi-square test

Hypothesis 2: There is a relationship between job satisfaction and productivity. Wald test was used to test this hypothesis to determine whether job satisfaction is effective on productivity or not. As it was mentioned earlier, variables that their significance level of Wald statistic is higher are removed from the model and it continues until error level reaches 10%. Given to the obtained results and the significance level that is less than 10% this relation is accepted, i.e. productivity is increased and decreased by increasing and decreasing of job satisfaction.

<table>
<thead>
<tr>
<th>Job satisfaction</th>
<th>Beta</th>
<th>Wald</th>
<th>Degree of freedom</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.663</td>
<td>19.745</td>
<td>1</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Table 6- Output of Wald test related to hypothesis two

Hypothesis 3: There is a relationship between job stress and productivity. Wald test was used to test this hypothesis to determine whether job stress is effective on productivity or not. As it was mentioned earlier, variables that their significance level of Wald statistic is higher are removed from the model and it continues until error level reaches 10%. Given to the obtained results and the significance level that is less than 10% this relation is accepted, i.e. productivity is increased and decreased by increasing and decreasing of job stress.
Conclusion

Results of the first hypothesis show there is a positive relationship between job stress and job satisfaction. Since keeping human resources is regarded as one of the most important tasks of managers they must identify effective factors on organizational job satisfaction and improve job satisfaction level in the organization by eliminating negative factors and reinforcing the effective positive factors on it. The individual's job stress is one of the factors that has negative effects on organizational job satisfaction and decreases it. Therefore, it is possible to enhance job satisfaction in employees by identifying job stressful factors. Reisszade and Bagherpour (2007) and Anvari (2008) found a negative significant relationship among job burn-out, job stress and job satisfaction variables in their studies respectively. It means that whatever job stress and burn-out in managers is increased, their job satisfaction is decreased and results of their study are not consistent with the present survey. Evans, Haksly, Gatli, Wiber, Mirez, Pazhac, Meddina, Kendal and Cotana (2006) conducted a study entitled "the relationship among mental health, burn-out and job satisfaction among social workers in England and Wales" and showed job stress has a significant relationship with job satisfaction and mental health has a direct impact on job satisfaction. In addition, those who have a high work experience have more job dissatisfaction. Results of the present survey are consistent with research results of Ghezavati et al (2010), Malakuti et al (2005), Attar (1996), Ahmadi Khalife (2003), Sars (1988) and Friedman (1995).

Having confirmed the second hypothesis, it is concluded that individuals' job satisfaction has a direct relation with productivity. In order to explain this relation better it is appropriate to refer to the role of human force as a valuable capital in productivity. Human is the axis of productivity; therefore it is suggested to the Telecommunications Organization to allocate the highest possibilities to its human resources and consider factors such as job and specialized behavioral

<table>
<thead>
<tr>
<th>Job stress</th>
<th>Beta</th>
<th>Wald</th>
<th>Degree of freedom</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.663</td>
<td>19.745</td>
<td>1</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Table 7- Output of Wald test related to hypothesis three
training, rules and regulations and job descriptions, reinforcement of team work, job mastery, recognizing the inside and outside environment of the organization as well as the depth and limits of tasks, innovation, appearance and development of the individual and learning organization that will finally be led to establishment, training and development, application and continuity of productivity and generally its enhancement in the organization. Hence, regular and continuous approach of the individual's adaptability with an appropriate job at an appropriate time that includes both concepts of job satisfaction and productivity is the best option and strategy. Results of this survey are consistent with research results of Memarbashi (2012) and Hallok and Bouzinx (2010).

In explaining the findings related to hypothesis three it can be stated that each organization needs a labor force interested in its job so that it can have a high productivity. Several factors must affect managers' job satisfaction towards the organization and increase or decrease it and factors such as job stress should be studied. Studies reveal job stress which is created due to excessive and long-term burn-out decreases job satisfaction. On the other side, job stress decreases managers' motivation, satisfaction and performance, so job satisfaction is reduced by increasing of professional stress. Results of this survey are consistent with research results of Memarbashi (2012) and Hallok and Bouzinx (2010).
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