

# Investigating The Effect Of Job Stress On Performance Of Employees

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**Abstract:** This study is conducted to investigate the effect of job stress on job performance. A random sampling technique is used to collect primary data of 120 employees of four telecommunication companies of Mongolia i.e. Mobicom, Unitel, Skytel and G-mobile. A well-structured questionnaire is utilized to collect relevant data; descriptive and logistic analysis is used to estimate and describe the findings of results. It is found that work overload is major reason of stress among employees and majority of employees reduce their productivity and loss of interest in job due to stress. As for concern health issue, eyes strain, dizziness and disorder in sleep are due to job stress. According to results of logit model, parameters of education, experience and salary per month are statistically significant and have positive impact on employees' performance but age, family size, no relaxation time giving to employees during working hours and work overload are statistically significant and have negative impact on employees' job performance. For suggestions, companies should increase salaries of employees and give reward to employees those have work overload. Workload of employees should reduce by proper work redesign and efficient management by proper allocation of job. It is also found that stress also becomes reason of several illnesses and majority of employees don't have medical facilities (first aid) at working place, therefore it is suggested that companies should also provide medical facilities (first aid) for employees at work place.

**Index Terms:** Job stress, job performance, Mongolia, telecommunication companies, Logit model.

## 1 INTRODUCTION

The total GDP of Mongolia is 11.52 billion USD. The economic growth rate in 2014 is 11.3 percent which is more than 6.4 percent in 2010. It is also expected GDP in double rate from period 2014 to 2017. The contribution of service sector is largest 48 percent to GDP of Mongolian, however industrial sector contribution is 37 percent and agricultural sector contribution is 15 percent to total GDP of Mongolia [1]. Mongolia is steadily introducing advance telecommunication services and committed to modernizing the telecommunication sector. The Government has taken step to introduce advance infrastructure development particular focusing on development of telecommunication sector because it is center the development of economy, boost up foreign investment, increasing living standard of local people, increasing trend of tourism and private sector investment and implementation of innovative technology.

Due to strong growth of mobile phone market the line network is declining. By launching 3G networks recently the popularity of smart phones also has been increasing. There are two competitive telecommunication segments with two GSM and two CDMA mobile telephone service operators. There are also two more mobile licensed companies awarded in 2005-06 are Unitel (GSM) and G-Mobile (CDMA) for the rural operators [2]. Keeping in view the contribution of service sector to GDP of Mongolia, it is dire need to improve the efficiency of telecommunication sector. There are different dimension to increase the efficiency or productivity of telecommunication sector. Improve the job performance of employees' of telecommunication service companies is one of important dimension to enhance the efficiency of this sector. There is sever problem of job stress is found in this sector and in industrial sector as well. Human resource management is core tool to enhance employees' performance and efficiency of service sector. Job stress is serious problem now days and it is growing trend in organizations. The idea of stress is first introduce by Selye[3] in life science. His view on stress in 1956 is that, it is not necessarily that stress is a bad thing it depends upon a situation how to take it. There are different views of different researchers about stress; stress is uncomfortable response from individual at certain level of time to different factors [4]. Stress is a condition which is produces when demand of an individual exceeds his level of capacity [5]. According to Fisher [6] stress is a cause when there is not personal control on physical, social and psychological environment. Stress increase absenteeism in employees and causes the loss of efficiency and productivity of employees [7]. Stress is a growing problem faced by related organizations often brings undesirable effects on employees' performance and organization. Stress also has unpleasant effects on the health of people. According to David [8] stress at work can lead to health problems and even injury. Unhealthy organizational climate reduces employee's performance. It is proposed and analyzed by Robbins and Sanghi[9], stress is not has only negative impact it also has positive influence on job performance, the absence of stress is death, optimal level of stress increase challenge and increase job performance of employees. Stress could be work as

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positive and negative as "Eustress " and " Anxiety " refers , respectively, to be distinguished . Indeed, the modern era known as the "age of anxiety and stress". Either organization big or small stress clearly reduce the performance of organizations due to stress. Absenteeism from job, trouble with other working colleagues, fatigue, late coming, low morale at work place etc. all could be causes due to work stress. The term of "Eustress" is related with positive and beneficial stress. It is like challenging but it also depends upon what is source of stress. Eustress is helpful to achieve goals and target with motivation and energy. Job performance is a target or task which is assigned to an individual to accomplish it within limited use of resources including constraint of time. Stress impact on the human in different ways, it tend to increase presser of management and reduce productivity [10]. Stress increase dissatisfaction of employees and reduces the work performance[11]. Based on the above discussion the current study have aim to highlight contribution of factors in reduction of performance of employees of telecommunication companies of Mongolia because the services sector have major contribution in economy of Mongolia. On the base of literature cited it is found that there don't have such type of research in the sector of telecommunication in Mongolia to investigate the effect of stress on employees' performance. The overall objective of this research is to determine different factors effecting on employees performance. The core objectives are to determine reasons of job stress, to determine effects of job stress on health of employees, to estimate of parameters having influence on job performance of employees and policy recommendations according to results of study.

**2 MATERIALS AND METHODS**

Ulaanbaatar which is capital of Mongolia is selected purposively as a study site. A simple random sampling technique is used to collect data from 120 employees of four telecommunication companies'i.e.Mobicom, Unitel, Skytel and G-mobile. The employees are included in top level managers, middle level managers and non-managers. A well structure and pretested questionnaire is used to gather information from employees and a pilot survey is conducted to check reliability of questionnaire and responses from respondents. The data is analyzed with the help of descriptive statistics (frequencies, mean and percentages) and econometrics model is used to determine significance of variables on performance of employees. A logistic model is used to investigate the influence of various parameters on job performance of employees; the general form of model is given below,

$$\ln \left( \frac{P_i}{1-P_i} \right) = \sum \beta_j x_{ij} + \mu_i \dots \dots \dots (1)$$

Where,  $P_i = \text{Prob}(y=1)$  is the conditional probability that employees having good performance of job, whereas  $(1 - P_i) = \text{Prob}(y = 0)$  shows conditional probability of having not good performance of job,  $\beta_j$  are parameters to be estimated whereas  $x_{ij}$  are independent variables having impacts on performance of job and  $\mu_i$  is the error term. This logistic regression is utilized in many studies for example, Polson and Spencer [12]; D'Souza et al.[13]; Hussain et al.[14]; Salasyaet al.[15] and Chilot et al.[16]. Similarly the

empirical form of logit model to included final variables is given below,

$$\ln \{P/(1-P)\} = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + \alpha_3 X_3 + \alpha_4 X_4 + \alpha_5 X_5 + \alpha_6 X_6 + \alpha_7 X_7 + \epsilon_i \dots \dots \dots (2)$$

Where,  
 $\ln \{P/(1-P)\}$ = Dependent variable (1=Good employees job performance; 0=Otherwise)  
 $\alpha_0$  = Intercept term of the model.  
 $\alpha_1, \alpha_2, \alpha_3, \alpha_4, \alpha_5, \alpha_6, \alpha_7$  and  $\alpha_8$  are the parameters to be estimated.  
 $X_1$  = Age of respondent (Years)  
 $X_2$  = Education (Number of years)  
 $X_3$  = Family size (Number of heads)  
 $X_4$  = Job experience (Numbers of years)  
 $X_5$  = Salary(USD per month)  
 $X_6$  = No relaxation time during working hours (1=Yes; 0=Otherwise)  
 $X_7$  = Work overload Dummy (1=Yes; 0=Otherwise)  
 $\epsilon_i$  = Stochastic error term.

**3 RESULTS AND DISCUSSIONS**

This portion is divided into two parts, first is about detail of descriptive analysis and second part consist of econometrics analysis.

**3.1 Descriptive Analysis**

**3.1.1 Summary statistics of socio-economics and demographic variables**

The variables included in descriptive statistics are given in detail in table 1. The average age of total sample population is found 32 years. It is found that average education level is up to graduation. Majority of population in sample is male respondents, 65 percent is male and 35 percent is female respondents. Around 70 percent respondents are married having average 3 numbers of children. Similarly average family size is more than 6 numbers of persons and more than 2 numbers of persons are economically dependent in each family. Keeping in view experience it is found that average years of experience is more than 7 years with an average salary is 715 UDS.

**TABLE 1**  
 Definition and Summary of Basic Variables

Variables	Mean	Std. Deviation
Age (Years)	32.275	6.6724
Education1	4.058	0.8331
Gender (1=Male; 0=Female)	0.658	0.4763
Marital Status (1=Married; 0= Otherwise )	0.708	0.4564
Number of Children	3.036	1.2142
Family Size (Number of persons)	6.458	1.4076
Number of persons economical dependent	2.779	1.0584
Experience (Years)	7.263	3.3058
Salary per month (USD)	715.875	159.5407

1(1) Up to primary (2) Up to middle (3) Up to matriculation (4) Up to graduation (5) Up to master (6) PhD (7) Other

**3.1.2 Occupational Stress and Job Performance**

**Experience of occupational stress**

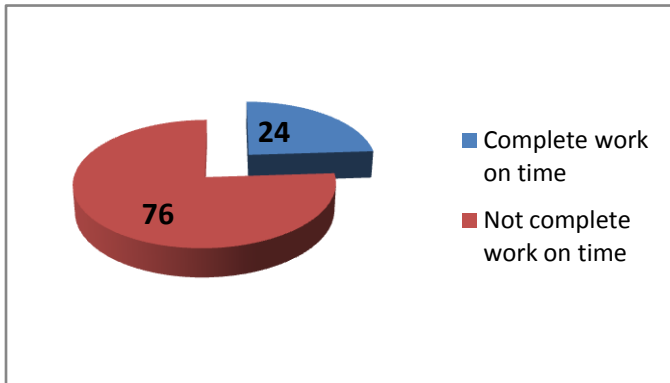
Results depicted that 80 percent respondents are reduced their performance due to stress and when further asked about what kinds of effects of stress they have, it is found that 27.5 percent of respondents have reduced their work productivity, 25.2 have reduced their moral, 11 percent having poor work relations with their colleagues and 8.8 percent of respondents having absenteeism from job due to work stress. It is found that majority of respondents reduce their work productivity due to stress.

**TABLE 2**  
Stress Effect on Performance of Employees

Responses	Frequency(Percentage)
<b>Stress reduces work performance?</b>	
Yes	96 (80.00)
No	24 (20.00)
<b>If yes what kinds of effects?</b>	
Absenteeism from job	8 (8.80)
Reduce work productivity	25 (27.50)
Low moral	23 (25.20)
Poor work relations	13 (11.00)
Loss of interest in work	25 (27.50)

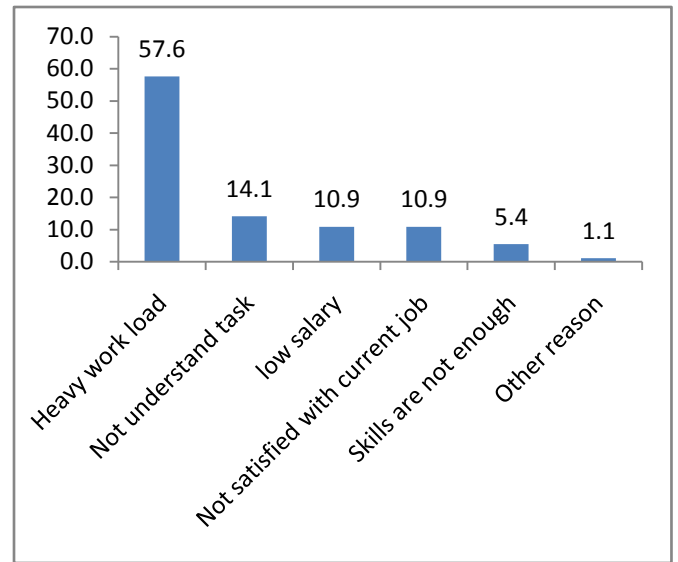
**3.1.3 Frequency of completion of tasks on time and reasons for not accomplished tasks on time**

Employees' efficiency plays a vital role to increase efficiency of a company or organization and efficiency of employees is related to their work efficiency. This study revealed that about 24 percent of employees have completed their work on time and 76 percent of them not completed their work on time (figure 1).



**Fig.1.** Frequency of completion of tasks on time

The reasons for not completion of work on time are given in figure 2. About 57.6 percent of employees not finished their targets on time because of heavy work load, while 14.1 and 10.9 are not completed their target works due to not understanding of given tasks, low salary and not satisfied with current job respectively. Similarly around 5.4 and 1.1 percent of employees could not finish their work on time due insufficient skills and other reasons.



**Fig 2.** Reason for not finish tasks on time

**3.1.4 Working conditions and situations of job**

The four parameters i.e. work very fast, work very hard, great deal of work have to do and more work than capacity of employees are parameters to increase occupational stress and these parameters are described in table 3. About the work very fast, it is asked from the employees, around 25.8, 25 and 20.8 percent of employees respectively have occasionally, always, rarely and almost always have to work very fast respectively. But only 4.2 percent of employees never have to work very fast. It is found majority of employees need to do work very fast. As for concerns about second parameter i.e. work very hard, results revealed that, fifty percent of employees always have to do work very hard. Around 25 percent of employees almost always, 17.5 percent of them on occasionally and 7.5 percent are rarely had to do work very hard. Similarly, consideration the third parameter under analysis, it is found that more than 50 percent of employees have great deal of work to be done, while 26.7 percent almost always, 14.2 percent occasionally, 6.7 percent rarely and more than 1 percent of employees never have great deal of work to be done as shown in table 3. The fourth parameter is related to more work than capacity of employees is given in last column of table 3. Majority of employees (52.2%) have to do work more than their capacity. The rest of them 22.5, 16.7, 3.3 and 5 percent of employees respectively, almost always, occasionally, rarely and never have to do more work than their capacity. It is found from job situation, employees have very tight job conditions, like work very hard, there is great deal of work to be done and more work than capacity of employees.

**TABLE 3**  
Situation of Job

Indicators /Response	Work very fast	Work very hard	Great deal of work to be done	More work than employee capacity
Never	4.2	0	1.7	5
Rarely	24.2	7.5	6.7	3.3
Occasionally	25.8	17.5	14.2	16.7
Almost always	20.8	25	26.7	22.5
Always	25	50	50.8	52.2

**Note:** All given figures in the table are in percentage

### 3.1.5 Effects of work on health

The information about effects of stress on health of employee is given in table 4. Around 54.2 percent of employees reported that they have dizziness due to heavy work load, while 49.2 percent have disorder in sleep, 42.5 percent have dizziness due to stress, 35 percent have fever due to heavy work load and 31.7 percent have problem of loss of appetite due to heavy work load. Eyes strain, disorder in sleep and dizziness are found top three major health problems due to stress.

**TABLE 4**  
Effect of Work Stress on Health

Parameters/ Response	Yes	No
Dizziness due to stress	42.5	57.5
Any eyes strain due to heavy work load	54.2	45.8
Fever due to heavy work load	35.0	65.0
Loss of appetite due to heavy work load	31.7	68.3
Any disorder in sleep	49.2	50.8

### 3.2 Econometrics analysis

Binary logistic regression has been applied on data to check the significance level of certain variables on employee's performance. The results obtained are given in table 5. The coefficient of age is found statistically significant with negative sign, it is depicted that by one unit increase in age, the log of odds in favor of job performance of employees is reduces to -0.258 units. It is clear that the performance of employees will go down eventually at higher age. The coefficient of education is highly significant at 0 percent level of significance it is depicted that for one year increase in education the weighted log of odds in favor of job performance is increases by 2.088 units. Family size is also statistically significant at 0 percent, by increasing one unit in family size the weighted log of odds in favor of employees performance is decreases to -1.336 units. Taking experience under analysis it is found that experience is significant at 6 percent, by increase one unit experience the weighted log of odds in favor of employees performance is increase by 0.405 units. Salary per month is statistically significant at 8 percent level of significance and it is suggested that by one unit increase in salary the weighted

log of odds in favor of employees' performance is increases to 0.006 units. Relaxation time during working hour is very important for employees. The parameter of no relaxation time during working hours is found to be significant at 3 percent with negative sign and it is depicted that by one unit increase in no relaxation time during working hours the weighted log of odds in favor of employees performance is decreases to -3.388 units. Similarly coefficient of workoverload is significant at 2 percent, it is revealed that by one unit increase in workoverload the weighted log of odds in favor of employees performance is decreases to -2.355 units. For short term increasing in workoverload can increase productivity but it can increase costs, stress, illness and low employees performance for long term.

**TABLE 5**

Logistic Model Variable's Coefficients, their Standard Errors, P-Value and Odds Ratios

Variables	B	S.E.	Sig.	Exp(B)
Age (Years)	-0.258	0.133	0.052	0.773
Education (Number of years)	2.088	0.649	0.001	8.070
Family size (Number of heads)	-1.336	0.505	0.008	0.263
Experience (Years)	0.405	0.219	0.065	1.500
Salary per month (USD)	0.006	0.004	0.085	1.006
No relaxation time during working hours (1=Yes 0= Otherwise)	-3.388	1.540	0.028	0.034
Work overload (1=Yes 0= Otherwise)	-2.355	1.072	0.028	0.095
Constant	1.532	4.007	0.702	4.628

## 4 SUMMARY AND CONCLUSION

On the base of analysis following summary and conclusion is drawn. In the profile of selected respondents average age is 32 years and education level is up to graduation. Male respondents (65%) are more than female respondents (35%). An overwhelming 70 percent of respondents are married with having average 3 numbers of children, family size is more than 6 numbers of persons and more than 2 numbers of persons are economically dependent in each family. It is found that an average year of experience is more than 7 years with an average salary is 715 UDS. It is found that employees reduce their work productivity due to job stress and work overload is main reason of job stress. Keeping in view situation of job conditions of employees, results revealed that employees always have to do work very hard, there is great deal of work to be done and more work have to do than their capacity. These are critical situations have strong contribution in reduction of employees performance. An overwhelming 69.2 percent of employees have got their last illness due to work stress, eyes strain, disorder in sleep and dizziness is found more common illness among employees due to work stress. It is concluded that employees could suffer from other kind of chronic diseases if stress remain persistent. Considering different parameters for econometrics analysis, it is found that age, family size, no relaxation time giving for

employees during working hours and work overload are statistically significant and have negative impact on employees performance. But other parameters, education, experience and salary per month are statistically significant and have positive impact on employees' performance.

## 5 SUGGESTIONS AND POLICY MAKING

By encapsulating all above discussion, it is found that occupational stress has significant negative impact on employees' performance. The suggestions and policies are given below,

1. From the analysis it is found that more working population of sample is youth and therefore they could be very efficient and competitive if organizations increase their salaries.
2. This study analyzed that stress have negative impact on productivity of employees, therefore the culture of formal organizational communications is very important. Open communications system among each level of staff is very important to reduce employees stress and increase work performance.
3. No time of relaxation for employees during working hours have negative impact on work performance; organization should provide proper time of relaxation during working hours for the employees to ensure good performance of employees.
4. Employees are suffered from eyes strain, disorder in sleep and dizziness due to work stress but majority of employees don't have any medical facilities (first aid) at their workplaces. Therefore organizations should provide medical facility (first aid) to deal health problems of employees.
5. It is also found that some employees have not finished their target work on time because they have heavy work load and some of them reported that their skills are not enough for given assignment. Organizations should make proper work design and there should have efficient allocation of employees for proper job according to their skills.

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