

Prediction of Job Stress among Employees through the Dimensions of Time Management Skills by Managers

Bitā Ajilchi^{1*} and Flor Rezaei Kargar²

¹Department of Psychology, Faculty of Human Science, Science and Research Branch University, Islamic Azad University (IAU), Tehran, Iran; Ajilchi_b@yahoo.com

²Department of Psychology, Faculty of Human Science, Central Tehran Branch University, Islamic Azad University (IAU), Tehran, Iran; flor.rezaei@gmail.com

Abstract

Objectives: This study attempted to predict employee job stress and its dimensions through the time management skills of managers. **Methods/Statistical Analysis:**The research method was descriptive-co relational. The statistical population comprises all the employees at all the branches of the Islamic Azad University in Tehran during the academic year 2009-2010. The sample consisted of 102 individuals (30 managers and 72 employees) from the Faculty of Literature and Humanities, Central Tehran Branch, selected through a random cluster procedure. The research instruments were a time management skills' questionnaire for managers and a job stress questionnaire for the employees. **Findings:**In addition to descriptive statistical methods, the Pearson's correlation coefficient, linear regression and multiple regressions were applied for data analysis. The results of analysis showed that there was a significantly negative correlation between the time management skills of managers and employee stress at $P < 0.05$, regarded as a good predictor. In addition, the meetings' management and job stress, as well as physical stress and organizational stress, (dimensions of job stress), of the employees were significantly correlated at $P < 0.05$, regarded as a good predictor. Furthermore, after entrusting the time management, it was in a significantly negative correlation with employee organizational stress, being capable of prediction ($P < 0.05$). **Conclusion:**According to the results, teaching of time management skills on managers to enhance the mental health of employees and their performance will be useful.

Keywords: Employees, Job Stress, Managers, Time Management Skills

1. Introduction

According to the National Institute for Occupational Safety and Health (NIOSH), job stress occurs when there is no coordination between environmental needs and abilities, capabilities and wishes. From the standpoint of cognitive approach, stress is a response to emotional arousal given out to environmental stressors perceived by a person as danger or fear^{1,2}.

In this regard, a longitudinal study from 2009 to 2012 demonstrated that, not only is there a significant relationship between a psychologically stressful

environment and muscular/skeletal problems, but the environmental stressors also increase skeletal problems³.

In its psychological dimension, job stress is diagnosed based on several symptoms, such as depression, anxiety, feelings of hopelessness, loneliness and job dissatisfaction⁴. In the behavioral dimension, it is accompanied by absenteeism, aggression and troublesome behavior toward other people⁵, increased accidents at work, absenteeism and burnout⁶. Studies in this area have shown that occupational stressors can cause distraction, impaired concentration and memory, uncertainty in performing ordinary tasks and degraded decision-making capability⁷.

* Author for correspondence

Cooper and Cartwright divided the job-related stressors into three categories as follows: 1. Occupational stressors; 2. Individual stressors; 3. Organizational stressors^{8,9}.

Depending on the nature of the job, the occupational stressors cover a variety of tasks and the contributing factors, such as temperature, noise and restrictions¹⁰. Studied far more than other factors, the individual stressors encompass the excessive workload, high work rate, role conflict, role ambiguity, poor interpersonal relationships and inadequate social support¹¹. Organizational stressors cover the culture, internal management problems, lack of individual participation in decision-making, poor communication, lack of job security, corporate policies and a totalitarian leadership style¹². Studies have shown that individual positive perception of organizational support ratio will lead to improved job performance¹³.

Statistics show that stress and its complications cause the loss of hundreds of working days every year; i.e. an average of one million people daily refrain from attending the workplace due to stress-related disorders and illness.

Time management is a skill for the managers of organizations, including the optimal use of skills adopted by a manager in the optimal use of time and the achievement of organizational goals in connection with the performance of professional duties¹⁴, which encompasses several skills: the prioritization of tasks and objectives, delegation, communication management and meetings' management.

Mackenzie argued about the importance of prioritizing the tasks; that the key to success lies in time management, where the most important tasks are addressed before any other. It is a daily feature of time management to plan and prioritize¹⁵. Mahdikhani regarded a good manager as a person who frees himself from repetitive tasks and routines, which requires delegation¹⁶. Moreover, Eslami argued that one of the main reasons for the wastage of time is "the inability to communicate with others"¹⁷. Alvani deemed a waste of time as giving a positive response to everything because it gives the managers a large volume of requests that may not be completely fulfilled¹⁸. Furthermore, Lockett believes that the meetings take a lot of management time and "meetings management" is an art requiring time management¹⁹. Hoefyster investigated the relationship between time management and stress, where there were several factors such as paperwork, visitors, unnecessary phone calls and colleagues needing contributions to an organizational

waste of time²⁰. Time management leads to increased awareness of available time and duties as planned and performed more effectively, thereby to achieve maximum productivity^{21,22}. Meanwhile, time management affects the mental health of individuals, thus curtailing the psychosomatic problems and work-related stress^{23,24}. In this regard, many researchers demonstrated a significant relationship between job stress and time management²⁵⁻²⁹.

Given the role of time management, pointed out that the need for the development and application of formal education and attention to time management and stress management in higher education institutions is essential²².

According to the principle of efficiency and the promotion of physical and mental health in the workplace, it is a crucial measure in optimizing business operations, to increase productivity and prevent accidents so identifying the direct effects of stress on the performance of employees³⁰.

For that purpose, the current study focused on the time management skills and its dimensions as factors affecting job stress and its dimensions in employees so as to examine their inter-relationships. In this context, the following hypotheses were formulated:

- Time management skills of managers can predict the job stress in employees.
- Dimensions of time management skills of managers can predict the job stress in employees.
- Dimensions of time management skills of managers can predict the physical stress in employees.
- Dimensions of time management skills of managers can predict the organizational stress in employees.
- Dimensions of time management skills of managers can predict the job nature stress in employees.

2. Methodology

2.1 Method, Statistical Population, Sample

This was descriptive-co relational research. The statistical population consisted of all employees (including managers and employees) working in Tehran's Islamic Azad University branches during academic years 2009-2010. A certain number of employees at the Faculty of Literature and Humanities, Central Tehran Branch (Vali-Asr Complex) were selected by a random cluster procedure. Among different branches of the Islamic Azad University, the Tehran Central Branch and its Faculty of Literature and Humanities (Vali-asr Complex) were selected with a total of 30 managers and 72 employees being involved in the research.

3. Measurement Instrument

Time Management Skills Questionnaire has been constructed by Karami Moghadam³¹. It comprises a total of forty items determining the level of time management skills and their six dimension (goal-setting, prioritization of objectives and activities, operational planning, delegation, communication and meetings' management). The reliability of the Time Management Skills Scale was calculated through test-retest and Cronbach's alpha at 0.91³¹. Moreover, in another research reported a reliability of 0.97 for the time management skills' scale at significant level of 0.001²⁷. In this study, the Cronbach's alpha coefficient for the questionnaire was obtained to be 0.67. For instance, two items in the questionnaire included: *I always set accurate and specific goals for myself; I make a list of what I should do every day.*

Job Stress Questionnaire has been constructed by Kamkari³², containing a total of 31 items determining the level of stress and its three dimensions; physical stress, organizational stress and job nature stress. The reliability of the Job Stress Scale was reported through test-retest and Cronbach's alpha to be 0.77³². In this study, the Cronbach's alpha coefficient for the questionnaire was found to be 0.94. Some of the items in the above questionnaire are as follows: dominance of relationships rather than regulations (for organizational stressors); growing occupational crowd (for the physical stressors) and increasing occupational sensitivity and precision (for the job nature stressors)

4. Procedure and Analysis

After visiting the selected Faculty and gaining the consent and cooperation of all the managers, the specific questionnaire for the time management skills for managers and the job stress questionnaire for employees were distributed and completed as individual and self-reports. At the next stage, the data were analyzed through several descriptive statistical measures such as mean, standard deviation and inferential statistics including the Pearson's correlation coefficient, linear regression assisted by SPSS 16.

5. Findings

The hypothesis arguing that there is a relationship between the time management skills of managers and the job stress

of employees was evaluated through the linear regression method. The correlation coefficient between the time management skills of managers and the job stress of employees indicated the required correlation (minimum 0.3) to assess the predictive power of employee job stress through the time management skills of managers by linear regression. The descriptive values for the two variables above and their inter-correlation have been displayed in Table 1.

Table 1. The descriptive values and correlation coefficient for time management skills of managers and employee job stress

Variable	Mean	Standard deviation	Employee job stress
Time management skills of managers	130.40	8.54	[*] -0.36
Employee job stress	100.97	19.76	-

*P<0.05

As can be seen in Table 1, there is a significantly negative relationship between the time management skills of managers and the job stress of employees at P<0.05.

The significance level of the linear regression model for the prediction of employee job stress through the time management skills of managers have been displayed in Table 2.

Table 2. Linear regression for prediction of employee job stress through the time management of managers

Source of variations	Sum of Squares	Degree of freedom	Mean of squares	F	Significance level
Regres-sion	59.2028	1	59.2028	4.27	0.048
Residual	21.13298	28	93.474		

With regard to Table 2 and the emphasis on the significant F value at P<0.05, it can be argued that there is a predictive power of employee job stress through the time management skills of managers. Hence, the regression coefficients were identified and explained by determining the table of regression coefficients.

According to the linear regression coefficients in Table 3, it can be argued that the regression model involves the time management skills of managers negatively capable of explaining the significance of variance for employee job stress at P<0.05.

Table 3. Regression coefficients for prediction of employee job stress through the time management skills of managers

Criterion variable	Predictive variable	B	β	t
Employee job stress	Time management skills of managers	-0.97	0.36	2.06*

*P<0.05

The hypotheses about the relationship between the dimensions of time management and the dimensions of employee job stress were evaluated through multiple regression analysis. The preliminary analyses were not carried out so as to ensure the assumption of normal distribution, linearity and dispersion homogeneity. The values of Pearson’s correlation coefficient between the dimensions of time management skills of managers indicated the needed correlation (maximum 0.7) for the variables to adopt the multiple regressions. The descriptive values and correlation coefficients between the variables under study have been shown in Table 4.

Table 4. The descriptive values and correlation coefficient for time management skills of managers and employee job stress

Variable	Mean	Standard deviation	Organizational stress	Physical stress	Job nature stress	Jobstress
Goal-setting	14.93	1.98	0.17	0.41*	-0.07	-0.10
Prioritization of goals and activities	24.50	2.89	-0.10	-0.25	0.08	-0.17
Operational planning	30.73	3.59	0.24	-0.14	-0.07	0.06
Delegation	21.56	2.09	-0.53*	0.20	-0.04	-0.23
Communication management	26.43	4.06	-0.03	-0.24	-0.31	-0.19
Meetings management	12.23	2.31	-0.40*	-0.57*	-0.27	-0.57*
Organizational stress	38.52	11.19	-	-	-	-
Physical stress	35.77	9.15	-	-	-	-
Job nature stress	26.66	4.22	-	-	-	-

*P<0.05

Considering Table 4 and the emphasis on the correlation coefficients, it can be argued that among the dimensions of time management, only the meetings’ management is in a significantly negatively correlation with job stress at P<0.05. Furthermore, from the evaluation of the relationship between the dimensions of time management and the dimensions of job stress, it was evident that goal-setting was in a significantly negative correlation with physical stress and delegation with organizational stress, meetings’ management with organizational stress and physical stress at P<0.05.

The significance level of the regression models for the prediction of employee job stress and its dimensions through the time management dimensions of managers have been displayed in Table 5.

Considering Table 5 and the emphasis on the F values, it can be argued that there is a predictive power of job stress, physical stress and employee organizational stress through the time management skills of managers at P<0.05. The regression coefficients were identified

Table 5. The multiple regressions for predicting the job stress and its dimensions through the dimensions of time management

Criterion variable	Predictive variable	Source of variations	Sum of Squares	df	Mean of squares	F	Sig
Employees Job stress	Time management dimensions of managers	Regression	6651.97	6	1108.66	2.93	0.028
		Residual	8674.82	23	377.16		
Employee Organizational stress	Time management dimensions of managers	Regression	2861.97	623	476.99	4.01	0.007
		Residual	2735.22		118.92		
Employee physical Stress	Time management dimensions of managers	Regression	1590.10	6	265.01	3.05	0.024
		Residual	1995.75	23	86.77		
Employee job nature Stress	Time management dimensions of managers	Regression	125.74	6	20.95	1.22	0.330
		Residual	393.72	23	17.11		

and explained for the significant relationships through determining the table for regression coefficients.

According to the multiple regression coefficients through the simultaneous import, it can be argued that meetings' management was negatively capable of explaining a significant part of the variance in employee job stress at $P < 0.05$. Furthermore, the level of beta coefficient at -0.57 suggests that only meetings' management had the largest contribution in explaining the employees' job stress.

In addition, the delegation and meeting management were negatively capable of predicting a significant portion of the variance in organizational stress at $P < 0.05$. Since the beta coefficients for these variables were respectively 0.43 and -0.39, it can be argued that delegation by managers made a uniquely powerful contribution to explaining the employees' organizational stress.

Moreover, meetings' management was negatively capable of predicting a significant part of the variance in the physical stress of employees at $P < 0.05$. Considering the level of beta coefficient at -0.56, it can be stated that only meetings' management made the largest contribution in explaining the employees' physical stress.

6. Discussion

This study aimed to investigate the relationship between the time management skills of managers and employees' job stress and their dimensions at Islamic Azad University, Central Tehran Branch. The findings in Table 1 indicated that time management skills were in a significantly negative correlation with employee job stress at $P < 0.05$. According to Tables 2 and 3, it can be predicted; i.e. as the time management skills of managers are enhanced, there will be lower job stress among the employees and vice versa. Therefore, the first hypothesis is proved. This finding is consistent with many researches²³⁻²⁹. From the standpoint of cognitive approach, stress is a response to environmental stressors. Thus, the application of time management leads to an increased awareness of available time and more effective planning of result tasks, thus curtailing the environmental stress^{21,22}. Moreover, from the standpoint of Greenberg, job stress is deemed to be the lack of coordination between the needs of the professional and personal skills and capabilities of the person, where the application of time management leads to appropriate planning and the efficient use of time, and

Table 6. Regression coefficients for prediction of employee job stress and its dimensions through the time management dimensions of managers

Criterion variable	Predictive variable	B	β	t
Job stress of Employees	Goal-setting of Managers	0.24	0.02	0.06
	Prioritization of Managers	-0.01	-0.01	-0.01
	Planning of Managers	0.95	0.14	0.79
	Delegation of Managers	-2.27	-0.21	-1.07
	Communication management of Managers	-1.34	0.23	-1.13
	Meetings management of Managers	-5.68	-0.57	*-3.30
Organizational stress of Employees	Goal-setting of Managers	2.06	0.29	1.03
	Prioritization of Managers	-0.92	-0.19	-0.88
	Planning of Managers	0.56	0.14	0.83
	Delegation of Managers	-2.89	-0.43	*-2.35
	Communication management of Managers	-0.92	-0.26	-1.38
	Meetings management of Managers	-2.35	-0.39	*-2.44
Employees Physical stress of Employees	Goal-setting of Managers	1.97	-0.35	-1.16
	Prioritization of Managers	0.53	0.13	0.59
	Planning of Managers	0.29	0.09	0.51
	Delegation of Managers	0.59	0.11	0.56
	Communication management of Managers	0.03	0.01	0.06
	Meetings management of Managers	-2.73	-0.56	*-3.31

* $P < 0.05$

coordination between job requirements and individual abilities, aimed at the reduction of stress³³. Since the managers of any department and organization play the most prominent role in guiding and monitoring the employees, they are essentially supposed to regulate the time for the optimal utilization for the accomplishment of tasks at hand. Thus, when the manager of a group acts desirably in maintaining and executing a systematic schedule, the employees will abide by the timing plan, be empowered to make the optimal use of time to carry out their jobs as best as possible. As a result, the stress caused by inadequate time for carrying out the working plans will be curtailed, and consequently there will be lower job stress among the employees.

According to Tables 3, 4 and 5 concerning the dimensions of time management, only meetings' management is in a significantly negative correlation with employee job stress at $P < 0.05$ with predictive power; i.e. any increase in meetings' management will reduce stress among employees. Hence, the second hypothesis was confirmed only for meeting management. The result is consistent with that obtained by Lockett¹⁹. He believed that the meetings take a lot of management time and "meetings management" is an art requiring time management. Accordingly, it can be stated that a manager able to adjust the meetings well and put in an appropriate amount of time, start and end the meetings at the scheduled times will, of course, find more time to deal with the rest of the duties and affairs. Moreover, the manager will have more time to respond to the employees concerning their tasks and problems, perform more efficiently and eventually curtail the stressors caused by occupational operation, particularly where the manager consultation and command are necessary. As confirmed in the next hypotheses, this holds true concerning the organizational and physical dimensions of job stress.

A closer look at the results of Tables 3, 4 and 5 will indicate that, among the dimensions of time management, delegation and meetings' management are in a significantly negative correlation with employee job stress at $P < 0.05$ with predictive power. Hence, the third hypothesis is confirmed for delegation and meeting management. According to the results, it seems that organizational stressors proposed by Ivansovich and Mattsson, and also Palmer et al. (2003) are lowered in employees through managerial delegation^{11,12}, which is consistent with the findings of Mahdikhani¹⁶. Furthermore, it is consistent with the opinion of Cooper and Cartwright who believed that when the employee bears an excessive burden

and there is no managerial delegation, the job stress will intensify⁸. In addition, meetings' management by managers can curtail the organizational stress imposed on employees. Similar to the previous hypothesis, it is consistent with findings of Lockett in the dimension of meetings' management¹⁹.

The information contained in Tables 3, 4 and 5 also show that among the dimensions of time management, only meetings' management is in a significantly negative relationship with employee physical stress at $P < 0.05$ with predictive power. Hence, the fourth hypothesis is confirmed for management meetings, consistent, like the previous hypotheses, with the findings of Lockett¹⁹. It seems that appropriate meetings' management by managers will curtail the occupational crowd of individuals caused by delay in holding the sessions or even complete cancellation, commotion, noise and potential objections, thereby to provide the employees with peace of mind for carrying out their tasks.

Other findings in Tables 3, 4 and 5 suggest that none of the dimensions of time management skills were significantly correlated with the job-nature stress among employees at $P < 0.05$, which is inconsistent with the findings of Cooper and Cartwright⁸. Their research showed that managers can curtail the employees' job stress by giving out a wider scope of operation and opportunities for utilizing the skills. It seems that individuals in the sample regard the nature of job as an individual aspect where the managers and their time management skills play no key role.

7. Conclusion

According to the results, teaching of time management skills on managers to enhance the mental health of employees and their performance will be useful.

It is beneficial to consider the role of moderating factors such as personality, experience strategies, age, sex, attitudes, education and experience, and social support groups, friends and colleagues, as well as comparisons between academic units in terms of time management practices for generalizing the results concerning the employees' job stress.

8. References

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