The Survey of Relationship between Time Management with Job Stress and Performance in Material and Procurement Management of N.I.S.O.C (National Iranian South Oil Company)

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ABSTRACT

Nowadays, factors such as economic globalization and the creation of global markets, rapid changes of technologies, knowledge-rich organizations, expansion of e-commerce, rapid and easy access of the consumer to goods and services, and change of consumer social requirements have caused competition among businesses, followed by stress on these organizations’ personnel. Thus, aside from organizational social responsibility for personnel physical and mental health, one of the pioneering organizational strategies in economic competition is to reduce personnel stress in order to eliminate negative consequences such as loss of efficiency. Because optimum time management controls and regulates stresses and day-to-day task flow, as well as reduces individual anxiety and stress, improved time-management techniques and technologies may be expected to have an effective role in improving operational efficiency. Three hypotheses were proposed and a significance level was considered for them. The method of this study is correlation of Olmstead’s (2010) time management, Parker and DeCotiis’(1983) job stress and Paterson’s(1992) job performance. Self-evaluation questionnaires were used for data collection. The population of this study is all personnel of National Iranian South Oilfields company’s supply and goods Affairs Department (477 people). 250 were selected using stratified random sampling. 228 completed and returned the questionnaires. Descriptive statistical methods (tables of frequency, percent, mean, etc.) were used to extract the results of questionnaires, and inferential statistical methods (Pearson’s coefficient of correlation) were used to test the hypotheses and data analysis. Using the statistical methods above and SPSS software, all data were analyzed. Results indicated that there is a significant relationship between time management and job stress, there is a significant relationship between time management and job performance, and there is a significant relationship between job stress and job performance. Finally, suggestions were presented to improve time management and efficiency and to reduce the job stress of personnel.

KEY WORDS: Time Management, job stress, job performance.

INTRODUCTION

Nowadays, life is filled with a never-ending array of challenges. It is a struggle to live and living becomes therefore a striving to attain life ambitions. In the process of the struggle to live, people become confronted with barriers and streams of life’s demands. Job life is one the important parts of our daily lives which cause a great deal of stress (Anazodo,Onyeizugbe&Uchenna,2012).

The influence of job stress on organizational and worker outcomes continues to gain increased recognition with the advancement of technology, globalization of work, demographic trends, constantly changing work roles and expectations, and increasing work demands (Beehr& Glazer, 2005; Cooper, Schabracq &Winnubst, 1996; Karoly & Panis, 2004).

Job stress refers to a state of negative feelings or reaction resulting from perceived undesirable work conditions that pose a threat to the individual (Jamal, 2007; Kahn &Byosiere, 1990; Karasek, 1979; Parker & DeCotiis, 1983; Xie& Johns,1995).

Job Stress has significant impact on corporate and personnel performance, and significantly affects health of employees (Mimura &Griffiths, 2003).

Researchers determined that the stress affects the life of employees in different ways; mostly it affects the efficiency of employees while they are on their jobs.

Employee’s efficiency is reported in terms of one’s performance in the workplace. Job performance is the individual’s productivity in both quantitative and qualitative aspects of the job. It shows that how well a person is
doing his job and the extent to which the employee is meeting the job duties and the policies and standards of his organization while doing his job (Coetzer & Rothmann, 2006).

People routinely encounter many distressing situations in their professional lives. Organizational strategies are aimed at reducing job stress and improving performance. Stress can be easily avoided or managed through proper management techniques such as time management, workflow management, and other means (Kavitha, 2009).

Poor allocation of time, however, has been shown to not only increase employee stress, also to impair performance at many levels (Macan, 1994).

Time management is defined as employee behavior which makes optimal use of time in the performance of purposeful activities. It is described as a blend of sensitivity of the value of time, the setting of goals, the prioritization of tasks, and the monitoring of outcomes (Claessens, van Eerde, Rutte, & Roe, 2007).

This definition describes time management as an example of self-regulation enabling employees the opportunity to improve their performance, enhance learning ability and achieve career success (De Vos and Soens, 2008).

**REVIEW OF LITERATURE**

Numerous studies have found that job stress influences employee job performance in the workplace. At the same time, increasing numbers of organizations now are more demanding of better job outcomes. In fact, modern times have been called as the “age of anxiety and stress (Coleman, 1976).

Although much of the research on the relationship between stress and functioning focuses on the negative performance effects of stress, not all stress is bad. Stress may be regarded both as a motivational force, and as a possible cause of depression.

Stress is considered to be the external stimulus that initiates the strain within the person (Kazmi, Amjad, and Khan, 2008) and such a stimulus may bring a positive or negative effect upon the performance of an employee on the job.

There are some relationships between Stress and Job Performance:

1. Curvilinear / U-Shaped
2. Negative linear
3. Positive linear
4. No relationship between stress & job performance

1. At moderate levels stress can improve individual performance: Yerkes and Dodson (1908) were the first to stumble upon the inverted U relationship between stress and performance.
2. A negative linear relationship has also been reported. Stress at any level reduces task performance by draining or decreasing an individual’s energy, concentration and time. Physiological responses caused by stressors also damage job performance. At low levels of stress, challenges are absent and performance may be poor. Most favorable performance is the result of high levels of stress (Salami, Ojokuku & Ilsanme, 2010).
3. A positive linear relationship shows that as the level of stress increases, job performance increases at the same rate. There is a positive impact of stress on job performance (Meglino 1997, Shah, Aziz, Jaffari, Waris, Ejaz, Fatima & Sherazi, 2012).
4. It is also reported in the literature that there may be no relationship between stress and job performance (Ali, Farooqui, Amin, Yahya, Ikrees, Amjad, Ikhalq, Noreen & Irfan, 2011).

Salami et al. (2010) showed that job stress brings about subjective effects such as fear, anger and anxiety among Nigerian managers, which results in poor concentration, mental blocks and poor decision making skills.

Adebayo and Omojola (2012) demonstrated that there were relationships between time management and administrative effectiveness.

Anazodo et al. (2012) found that academic workload affects the health of Nigerian university lecturers, and there is a significant relationship between work life balance and their performance. The findings of the study conclude that stress management is an imperative for improving the performance of Nigerian university lecturers, and that neglecting stress management techniques will adversely affect the growth of that higher education system.

Jamal (1985) argues that stress at any level reduces task performance by draining an individual’s energy, concentration, and time.

Vroom (1964) offers a similar explanation, suggesting that physiological responses caused by stressors impair performance.

During the last two decades, there has been a growing recognition of the importance of time management in reducing job stress and improve performance. Effective time management is clearly a factor in job performance (Barling, Kelloway, & Cheung, 1996; Macan, 1994), and thus can contribute to an organization’s profitability. Engaging in time management, particularly
in planning behaviors, can also contribute positively to group performance (Janicik & Bartel, 2003; Weldon, Jehn, & Pradhan, 1991).

Furthermore, poor time management has been associated with high stress and strain (Jex & Elacqua, 1999; Lang, 1992; Macan, Shahani, Dipboye & Phillips, 1990; Schuler, 1979). Claessens’ (2004) review of the literature included thirty-two empirical time management studies conducted between 1982 and 2004. Results showed that time management was a poorly defined concept; hence a new definition is proposed. The review demonstrated that time management behaviors were generally found to have a positive effect on perceived control of time, job satisfaction, stress reduction, job or academic performance, and health, although results were sometimes contradictory. Some evidence for individual differences in time management was found. Time management training has been shown to enhance time management skills, but only some studies found a relation with outcomes such as job performance.

The effect of time management training programs on time management and on outcomes such as job performance was investigated in eight studies in this review. The results with respect to the effectiveness of time management training were mixed. Five studies (Green & Skinner, 2005; King, Winett & Lovett, 1986; Macan, 1994; Slaven & Totterdell, 1993; Van Eerde, 2003) found support, as participants indicated that they did engage in time management behavior more frequently after a time management training program; one study (Macan, 1996) did not. A positive relation between time management training and performance (e.g. time spent on working on high-priority tasks) was found in three studies (Hall & Hursch, 1982; King et al., 1986; Orpen, 1994), whereas in two other studies (Macan, 1996; Slaven & Totterdell, 1993) this relation was not found.

Hypothesis
1. There is a significant relationship between time management and job stress.
2. There is a significant relationship between time management and performance.
3. There is a significant relationship between job stress and performance.

METHODOLOGY

The Method in this study is descriptive and correlation type. In order to Investigate relations between variables, Pearson’s coefficient of correlation were used. SPSS software for data analysis was used. Data obtained were analyzed at 0.05 level of significance for test hypotheses the study.

The population of this study is all personnel (477 individuals) of the National Iranian South Oilfields company’s Supply and Goods Affairs Department; 250 of this group were selected using stratified random sampling. 228 completed and returned the questionnaires.

The questionnaire used in this study included:
1. Olmstead’s Time Management Self-Assessment Questionnaire (2010)
2. Parker & Decotiis’ Job Stress questionnaire (1983)

Olmstead’s Time Management Self-Assessment Questionnaire
The Time Management Self-Assessment Questionnaire is a self-assessment tool which is designed to be used by professionals, management and staff to assess how well time is managed, and deals with the following variables:

- Timewasters
  - Telephone
  - Drop in visitors
  - Procrastination
  - Indecision
  - Paperwork

- Other people’s priorities
- Firefighting (crisis and priority management)
- Being organized

It is a 53-item summative Likert-type rating scale that measures overall time management using anchors that range from 1 (strongly disagree) to 5 (strongly agree).

In addition, in this study Cronbach’s alpha and split-half method were used to determine the time management questionnaire’s reliability, 0.93 and 0.85, respectively, indicating desirable reliability coefficients of the mentioned questionnaire. To determine the time management questionnaire’s validity, its score was correlated with the criterion score, so it was determined that there is a positive and significant relationship between them (p=0.0001 and r=0.77), indicating the validity of the time management questionnaire.
Parker & Decotiis’ Job Stress questionnaire
Job stress was measured using the Job Stress Scale (Parker & DeCotiis, 1983). It is a 13-item summative Likert-type rating scale that measures overall job stress using anchors that range from 1 (strongly disagree) to 5 (strongly agree).

Construct validity of the instrument was demonstrated in the study by Xie & Johns (1995) among 418 full time employees testing the correlation between Job Stress Scale and another established measure of job stress, the Emotional Exhaustion subscale of the Maslach Burnout Inventory (Maslach & Jackson, 1986).

Concurrent validity of the scale was established by testing the correlation of theoretically related variables of diminished satisfaction, low job performance and turnover intentions with the scores on the Job Stress Scale. Significant correlations were found between the Job Stress Scale and the four items job satisfaction scale ($r = -.34, p = .01$), a turnover intention item ($r = .31, p = < .01$) among 175 hospital employees (Jamal & Baba, 2003), and an overall global performance rating scale ($r = -.42, p = <.01$) (Jamal, 2007).

The instrument demonstrated high internal consistency reliability ranging from .74 to .89 across different occupational groups and culture (Addae and Wang, 2006; Glazer and Kruse, 2008; Hsieh, 2004; Jamal, 2007; Parker and DeCotiis, 1983; Xie, 1996). According to DeVellis (2003), a Cronbach’s alpha of .70 or better is acceptable and adequate. In this study, Cronbach’s alpha and split-half method were used to determine the job stress questionnaire’s reliability, which were 0.87 and 0.84, respectively, indicating desirable reliability coefficients of the mentioned questionnaire. To determine the job stress questionnaire’s validity as well, its score was correlated with the criterion score, so it was determined that there is a positive and significant relationship between them ($p=0.0001$ and $r=0.80$), indicating the validity of job stress questionnaire.

Paterson’s Job performance questionnaire
This questionnaire was introduced by Paterson (1992). It is a 13-item summative Likert-type rating scale that measures overall job performance using anchors that range from 1 (very little) to 5 (very much). Naami (2002) has reported the final coefficient of this questionnaire using as 0.74 and using split-half method as 0.68. Basically, this test is a graphic rating scale and created (by Paterson) for managers to evaluate their personnel performance.

In the present study, Cronbach’s alpha and split-half method were used to determine the job performance questionnaire’s reliability, which were 0.83 and 0.84, respectively, indicating desirable reliability coefficients of the mentioned questionnaire. To determine the job performance questionnaire’s validity as well, its score was correlated with the criterion score, so it was determined that there is a positive and significant relationship between them ($p=0.0001$ and $r=0.77$), indicating the validity of job performance questionnaire.

Analysis of the data

Table 1: Correlation coefficients for relationship between time management and job stress (N=228)

<table>
<thead>
<tr>
<th>Pearson correlation (r)</th>
<th>job stress</th>
<th>Time management</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$r = -.39^{**}$</td>
<td>$r = 0.01$ level**</td>
</tr>
<tr>
<td>Correlation is significant at 0.01 level**</td>
<td></td>
<td></td>
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</tbody>
</table>

A - Test of the hypothesis (H1) shows a significant negative relationship between time management and job stress.

Table 2: Correlation coefficients for relationship between time management and job performance (N=228)

<table>
<thead>
<tr>
<th>Pearson correlation (r)</th>
<th>job performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$r = 0.51^{**}$</td>
</tr>
<tr>
<td>Correlation is significant at 0.01 level**</td>
<td></td>
</tr>
</tbody>
</table>

B - Test of the hypothesis (H2) show a significant positive relationship between time management and job performance.

Table 3: Correlation coefficients for relationship between job stress and job performance (N=228)

<table>
<thead>
<tr>
<th>Pearson correlation (r)</th>
<th>job performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$r = - 0.38^{**}$</td>
</tr>
<tr>
<td>Correlation is significant at 0.01 level**</td>
<td></td>
</tr>
</tbody>
</table>
C -Test of the hypothesis(H3) shows a significant negative relationship between job stress and employee job performance.

**DISCUSSION OF THE FINDINGS**

1. **There is a significant relationship between time management and job stress.**

With 99% confidence, it can be said that there is a negative and significant relationship between time management and personnel’s job stress (p=0.0001 and r=0.39). Thus, the first hypothesis is confirmed. In other words, the better the time management, the lower the job stress, and the higher the job stress, the weaker the time management. These findings are also confirmed by Schuler, (1979), Macan et al.,(1990), Lang, (1992), Jex and Elacqua, (1999), and Claessens,(2004), which found a negative relationship between time management and job stress.

2. **There is a significant relationship between time management and performance.**

With 99% confidence, it can be said that there is a positive and significant relationship between time management and employee job performance (p=0.0001 and r=0.51). Thus, the second hypothesis is confirmed. In other words, the better the time management, the higher the job performance, and the higher the job performance, the more improved the time management. These findings are also confirmed by Hall and Hursch (1982), King et al. (1986), Macan et al.(1990), Weldon et al. (1991), Orpen (1994), Macan (1994), Barling et al.(1996), Janicik and Bartel (2003), Van Ererde (2003), Claessens (2004), Green and Skinner (2005), Ojokuku and Obasan (2011), and Adebayo and Omojola (2012), that showed a positive relationship between time management and job performance.

3. **There is a significant relationship between job stress and performance.**

With 99% confidence, it can be said that there is a negative and significant relationship between time management and employee job performance (p=0.0001 and r=0.38). Thus, the third hypothesis is confirmed. In other words, the more the job stress, the lower the job performance, and the weaker the job performance, the higher the job stress. These findings are also confirmed by Vroom (1964), Coleman (1976), Jamal (1985), Salami et al. (2010), and Anazodo et al.(2012), all showing there is a negative relationship between job stress and job performance.

**Summary of Findings, Conclusion and Recommendations**

Findings of this research outcome state that there is significant negative relationship between time management and employee job stress (p = 0.0001 and r = 0.39). There is significant positive relationship between time management and employee job performance (p = 0.0001 and r = 0.51). Finally, there is significant negative relationship between job stress and employee job performance (p = 0.0001 and r = 0.38).

Explaining the findings above, it can be concluded that high workload is one important stressing factor causing time pressure and stress on the personnel. Stressed employees have more job rotation, absence, and delay as well as having quantitative and qualitative reduction of productivity. For executive staff, this reduction is appeared as the reduction of work quality and drop of productivity, and for managers, as wrong decision making, disruption of work relationships, and having conflict with others. Consequently, skills of time management can help employees use the time more effectively and efficiently. With time management, tasks will be planned and prioritized, causing a reduction in time pressure and stress on employees and improve their performance.

Conclusions of this study have practical implications for those who are interested in enhancing productivity through improved time management techniques. This study suggests that time management has both direct and moderate relationships with job performance; therefore, better time management practices may enhance job performance and reduce job stress.

**A: Suggestions to policy makers and organization managers**

As we know, the relationship between time management and use of modern technologies is strong. Over the past three decades, improved technology has been a driving force in the development of better time management techniques, and improving efficiency. For instance, Update computer network, individuals’ abilities to quickly access to the internet, and purchase or gain information 24 hours a day are appropriate examples of the technology mentioned above.

Because over 60 percent of current and capital costs of the petroleum industry are assigned to supply goods and services, on-time supply of goods through reducing processes and purchase time has an important role in this industry’s operations. Consequently, it is suggested that the organization management begin to use electronic portal of purchase instead of traditional or manual methods. Increase of confidence in supplies, maximization of supply rate and reduction of operational costs, transparency, and effective use of assets are the advantages of implementing such portals; these advantages are important factors for success in a good supply chain. Electronic...
purchase portals, unlike traditional and manual methods, can reduce the purchase cover period and prevent capital accumulation in stockrooms. Creation of this portal maybe followed by important changes, such as reduction of delivery time and increase of goods’ supply processes rates. This may cause the processes, which are important in the field of purchase, to be carried out more uniformly so that buyers are able to purchase needed goods as soon as possible and at the same time, inventory volume could be reduced. Tenders and inquiries can be electronically done through this portal.

**B: Suggestions to personnel of the organization**

1. Prepare a list of what you are going to do today
2. Having a place for everything and placing each item in its location
3. Prioritize your duties
4. Do one important thing at a specific period of time
5. Avoid indecision and weakness in performing your activity
6. Determine a deadline or date for completing any task
7. Specify times for your personal affairs
8. Avoid long-term stressors
9. Have long-term objectives
10. Be aware of finding methods for optimizing the time management. Continuous improvement in using time should be a part of your life style.

**Acknowledgment**

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**REFERENCES**