Knowledge workers Productivity and Stress management and in the Irancell company

Asadallah Najafi

Department of Engineering and Technology, Islamic Azad University, Zanjan Branch, Zanjan, Iran,

Abstract: Background and Aim the stress is creating from high density, complexity and long hours of work. Stress is higher among Knowledge workers because of the nature of knowledge work based on the complexity and high focus, aside from the Millennium Challenge is the Productivity of Knowledge workers. The aim of this study reviews the relationship between stress and Productivity of Knowledge workers at the Irancell Company.Methods: In this cross, sectional study was studied 120 knowledge workers of Irancell Company. Data in this study were extracted through interviews and completing of the Productivity measurement questionnaire, stress measurement questionnaire and Knowledge workers Productivity measurement questionnaire.Results: The group of Computer Programming has highest Productivity and job satisfaction, and stress in this group is more desirable. Stress in the 95 percent confidence level and loyalty and job satisfaction in the 90 percent confidence level are associated with knowledge workers Productivity. Job's satisfaction has the most effect on knowledge workers Productivity.Conclusion: The findings of this study indicate that not only stress has harmful effects suffering of people to emotional and physical diseases. However, it affects on the Productivity of managers and knowledge workers. Deal with it, which need for proper proactive planning in this area, who should participate in planning the annual interest adhered.

Key words: stress; knowledge workers, Productivity, Irancell

INTRODUCTION

Stress is not a new phenomenon, and it has always existed throughout human history. Stress has effected in different forms on the man such as natural disasters, wars and massacres. According to the industrial revelation and profound changes in social, economic, cultural and political in all of communities and constantly the need to adapt to new conditions, the domain of stress has a greater intensity and extent. Today, Stress has been Pandemic in the world, and Knowledge workers involved it kindly (Asian Productivity Organization et al., 2004; Aakster, et al., 1974; Barker, et al., 1992). The scientific studies suggest that stress affects the body and mind health, and it wastes the potential energy of knowledge workers (Brown, et al., 1995; Bryan, et al., 1996; Carson, et al., 1995) Stress is a multidimensional concept. In the theoretical dimension, stress has been viewed as a stimulus, a response, or a process. In short, the stress defined by the stimulus approach is the stressors, or objective stressful events; the stress defined by the response approach is the strains, or one’s reactions to stressors. The stress defined by the process approach puts emphasis on one’s subjective appraisal of the demands of environments (Chiriboga, et al., 1983.) Based on the investigation of stress and health constructs, we placed the concepts of the response approach in the health domain and the concepts of stimulus and process approaches in the stress domain in this study.

Today, the word of stress applies as the modern term for expressing any concern or worry of everyday life, and uses as the part of human life. It is difficult to define stress. Not only stress is the result of itself, but also the cause of stress is itself (Devenport, et al., 2004; Drucker et al., 1999; Drucker, et al., 1991).

Stress provides an important conceptual and physiological link between an individual’s social context and their physical health status (McEwen, 1998) and research involving individuals’ exposure to social stressors and their overall well-being has increased notably.

Given the physiological emphasis on this stress–health relationship, the stress process has been operationalized almost exclusively as a characteristic of individuals. However, because the residential context may shape individual’s exposure to stressors (Devenport et al., 1996; Hui-Chuan Hsu, Yuan-Wei Kung, et al., 2007; Kriengkrai et al., 1998) researchers interesting in the relationship between stress and health have been increasingly sensitive about including information on individuals’ neighborhoods in their analyses. Previous research finds that residents of poor communities are more likely to experience stressful life events such as death of a loved one, job loss, and criminal victimization (Nickols.Fred, et al., 2000; Pepiptone, et al., 2002)

The convergence of research relating stress to health with neighborhood specific processes that are believed to affect physical health denotes an important and relatively new contribution to social scientific inquiry into population health differences. Over recent years there has been growing concern about stress in knowledge workers (Ramírez et al., 2006; Ramírez et al., 2004) Stress in nursing is a concern for a number of reasons. It can affect the knowledge workers, in terms of both physical and psychological health. Stress can result in financial costs for employing organizations.

Corresponding Author: Asadallah Najafi Department of Engineering and Technology, Islamic Azad University, Zanjan Branch, Zanjan, Iran, E-mail: asad.najafi@gmail.com
Studies on the association between stress and knowledge workers have been conducted for many years (Robert et al., 2005) However, the research findings are inconsistent in terms of their significance, magnitude, and, in some cases, direction. Some studies found a significant positive relationship between stress and knowledge workers distress (Scott et al., 2003) Some studies showed the little association between them. Other studies even demonstrated a negative correlation between them (Taylor et al., 1998) These inconsistent findings could result from three causes. First, different studies investigated different types of stress. For example, some studies focused on specific work stress or caregiver’s stress, while others focused on the measure of general life stress. Second, different studies were concerned with different knowledge workers facets. For example, some studies focused on, such as clinical diseases or symptoms, others.

Focused on social role functions or adaptive behavior, and still others focused on subjective life quality. Third, some moderators may exist between stress and health—such as social support, coping strategies, personality traits, demographic variables, study quality, and so on—which alter the association between stress and knowledge workers. In sum, “stress” and “knowledge workers” are multidimensional concepts. Different stress types and knowledge workers facets could result in different degrees of association, as shown in many studies. The exploration of moderators between stress and knowledge workers is drawing more attention. A moderator is a qualitative or quantitative variable that affects the direction and/or strength of the relationship between an independent variable and a dependent variable (Thomas et al., 1994.)

For improving of knowledge workers Productivity, it needs to identify main resources of stress. There are three main resources for creating stress (Environmental, Organizational, and individual factors). Environmental factors are focused on the political, economic and technological factors, which effects on the levels of stress in the staff. Organizational factors are: work needs (related factors on the jobs), role needs (related to pressures on the person), Intrapersonal needs (pressures are created by another staff), organizational structure (Differentiation at the level of organization and instructions), Organizational Leadership (management style of top managers). Individual factors are focused on Personal and family relationships, personal economic issues and inherent personality (Wheaton, 1999; Wang, 2003; Yi-Ping et al., 2005)

To study and analyze these problems, we should be able to answer some basic questions: What factors effects on knowledge workers Productivity? It Furthermore, provides conditions for output quality (And provides conditions for improvement Knowledge workers Productivity). It needs to select the suitable strategies for improving of Knowledge workers Productivity.

The study is set five major sections; the second part presents materials and methods. The third part presents result's analysis. The forth part describes discussions. The fifth part is expressed conclusions.

**MATERIALS AND METHODS**

Research methodology of this paper has been based on the analytical and descriptive Research. This analytical and descriptive type research has been carried out using the questionnaire as the research tool for gathering the required data. Data's gathering involved both reference material and a questionnaire survey. Sampling was simple random sampling and the data-gathering instrument was the questionnaire. The author had already undertaken research in this field, which had stimulated the decision-making techniques used to analyze this case study. There are four groups, and for any groups are selected 30 persons (in sum, it is selected 120 persons. In November 2008 a request for interviews and questionnaires was sent to a number of the Accountants(group1) (30 persons, 30% Male and 70% Female, 70% over 10 year’s experience), the production line supervisors(group2) (30 persons, 30% Male and 70% Female, 70% over 10 year’s experience), the researchers(group3) (30 persons, 30% Male and 70% Female, 70% over 10 year’s experience) and the computer programmers(group4) (30 persons, 35% Male and 65% Female, 65% over 20 year’s experience) in the Irancell Company. Prior to the interview and fill the questionnaire, the author explained the purpose of the research and made it clear that this information would be in the public domain, so any confidentiality concerns could be noted. The interview and questionnaire, from December 2009 to April 2010, lasted ten hours per week. The interview and questionnaire were semi-structured in nature, starting with general questions on the Knowledge workers Productivity management to put the respondent at ease. To ensure internal validity the interview and questionnaire were transcribed and sent to the experts for check that no commercially sensitive information had been included.

It is used three type questionnaires for data gathering (the first questionnaire is for reviewing of stress with 23 questions. The second questionnaire is for reviewing of Knowledge workers Productivity assessment with 10 questions, and the third questionnaire is for reviewing of Knowledge workers Productivity with 57 questions).

Data analysis is done using Minitab 17, Spss 16 based on the descriptive and inferential statistics.
RESULTS ANALYSIS

In the questionnaire, it is used the combination of three indexes (job satisfaction, loyalty to the organization and work stress) for measuring of Knowledge workers Productivity. In addition, the weights of the Knowledge workers Productivity factors are calculated by the correlation coefficient (see table 1).

<table>
<thead>
<tr>
<th>Groups</th>
<th>Knowledge workers Productivity</th>
<th>Work Stress</th>
<th>Loyalty</th>
<th>Job Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>G3</td>
<td>3.43</td>
<td>4.40</td>
<td>3.10</td>
<td>3.00</td>
</tr>
<tr>
<td>G4</td>
<td>3.50</td>
<td>4.40</td>
<td>3.15</td>
<td>3.20</td>
</tr>
<tr>
<td>G2</td>
<td>3.35</td>
<td>3.90</td>
<td>2.90</td>
<td>3.00</td>
</tr>
<tr>
<td>G1</td>
<td>2.67</td>
<td>2.60</td>
<td>2.40</td>
<td>3.00</td>
</tr>
</tbody>
</table>

According to table 1, Knowledge workers Productivity in G4 is more than other groups. In addition, job satisfaction and work stress in G4 is the desirable level rather than other groups. Therefore, there is the direct relationship between Knowledge workers Productivity with job satisfaction and work stress. Table 2 presents relationship between Knowledge workers Productivity with job satisfaction and work stress.

<table>
<thead>
<tr>
<th>Correlations</th>
<th>job satisfaction</th>
<th>loyalty</th>
<th>work stress</th>
<th>Productivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation</td>
<td>.743 **</td>
<td>.535 **</td>
<td>.435 *</td>
<td>1</td>
</tr>
<tr>
<td>ANOVA</td>
<td>.000</td>
<td>.002</td>
<td>.016</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>

According to Table 2:
- There is the direct relationship between Knowledge workers Productivity with loyalty and work stress in 95% confidence level, and there is the direct relationship between Knowledge workers Productivity with job satisfaction and loyalty in 90% confidence level.
- Job's satisfaction has effects more than loyalty and work stress (see table 3).

<table>
<thead>
<tr>
<th>Factors</th>
<th>Weights</th>
</tr>
</thead>
<tbody>
<tr>
<td>job satisfaction</td>
<td>74.3 %</td>
</tr>
<tr>
<td>loyalty</td>
<td>53.5 %</td>
</tr>
<tr>
<td>work stress</td>
<td>43.5 %</td>
</tr>
</tbody>
</table>

Therefore, the Knowledge workers Productivity increases based on the increasing of Job satisfaction and loyalty (see figure 1).

![Main Effects Plot for Productivity](image)

**Fig. 1:** Effects of the Knowledge workers Productivity on Factors.

Table 4 presents comparison between factors in 4 groups.
Table 4: Comparison between factors in 4 Groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Weight</th>
<th>Stress</th>
<th>Productivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1: Accountants</td>
<td>2.85</td>
<td>2.84</td>
<td>2.67</td>
</tr>
<tr>
<td>G2: Production line supervisors</td>
<td>2.87</td>
<td>2.95</td>
<td>3.35</td>
</tr>
<tr>
<td>G3: Researchers</td>
<td>3.06</td>
<td>3.01</td>
<td>3.43</td>
</tr>
<tr>
<td>G4: Computer programmers</td>
<td>3.27</td>
<td>3.03</td>
<td>3.50</td>
</tr>
</tbody>
</table>

According to table 4, it concludes that there is the direct relationship between Knowledge workers Productivity and stress. In addition, figure two presents interactions between four groups.

Fig. 2: interactions between 4 groups

RESULTS AND DISCUSSIONS

It may seem that there’s nothing you can do about your stress level. The bills aren’t going to stop coming, there will never be more hours in the day for all your errands, and your career or family responsibilities will always be demanding. However, you have a lot more control than you might think. In fact, the simple realization that you’re in control of your life is the foundation of stress management.

Managing stress is all about taking charge: taking charge of your thoughts, your emotions, your schedule, your environment, and the way you deal with problems. The ultimate goal is a balanced life, with time for work, relationships, relaxation, and fun – plus the resilience to hold up under pressure and meet challenges head on.

Stress is lower than the medium-level and Knowledge workers Productivity is the medium-level in the Irancell Company. There is the direct relationship between stress and Knowledge workers Productivity. Therefore, It needs managing of stress. Stress management starts with identifying the sources of stress in your life. This is not as easy as it sounds. True sources of stress are not always obvious, and it is all too easy to overlook own stress-inducing thoughts, feelings, and behaviors. Sure, it may know that theirs constantly worried about work deadlines. However, maybe it is their procrastination, rather than the actual job demands, that leads to deadline stress.

Measures that due to reduce stress factors in the Irancell Company, to remove or make ineffective the effects of stress and stress management, are:
- Exercise and physical activity,
- Deep breathing,
- Progressive muscle relaxation,
- Nutrition and healthy diet and rest,
- Fan inhibition of thought,
- To help people understand the situation,
- Development of goal-oriented culture,
- Promote cultural meditation on the staff,
- Administrator with biofeedback,
- Thinking, positive thinking prevalent among employees,
- Lifestyle management among employees

To reduce the stress level of the Irancell Company was the following actions:
Target in order to increase staff motivation: at first, it studied job description, secondly, Desirable performance standards documents, thirdly, Operational objectives write by employees with the guide the managers, and finally, the staff and management targets to try to show good performance.

Job's enrichment: it is focused on the some factors, such as, Empowering, Independent work, Favorable context for the dynamism and creativity, Career development and job rotation.

Recreation Staff Management:
Providing of Psychological needs of employees.

Changing of Physical conditions of the workplace:
Changing light, color of room and bettering air ventilation.

In addition, other's factors are:
- Development of Staff training and strategic plans
- Improvement or Proportion job with the worker
- Attention to ergonomic factors
- Attention to Mental health in the workplace
- endeavor Creation to managing stress
- Knowledge of the factors causing stress and emotional reactions and their physical
- Determine what can be changed,
- Reduce the intensity of emotional reactions to stress,
- Learning how to modulate the neural response to be physical,
- Increase physical strength,
- Ability to maintain emotional

Conclusions:
We have defined and classified the Stress factors effects on the Knowledge workers Productivity, and analyzed them using the statistical approach. The Knowledge workers Productivity is one of the most powerful elicitors of subjective emotion, yet it is not clear whether emotions elicited by the Stress are similar to emotions elicited by visual stimuli. It presents the stress strategy influence on the Knowledge workers Productivity. Consequent to this analysis, we have presented strategies for improving the Knowledge workers Productivity, which were verified and validated in a case study. The results were re-rating of the experts who confirmed that 83.2 percent, and it suggested for reliability. Validity of the model is used the Cronbach’ alpha value was 88.2 percent, which indicates validity of the model.

ACKNOWLEDGEMENT
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