Stress Management In Research Projects

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Abstract: - The paper analysis how stress occurs in research projects proposing a set of recommendations on methods and techniques that can be used to prevent and/or eliminate negative stress.

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1 INTRODUCTION

Amid the profound changes in the companies and the economy as a whole, but also the need to adapt to markets globalization has led to widespread acceptance of management thinking based on project management. This means achieving a long-term future projection of specific company goals and objectives [1]. Basically, any activity that is intended to have objectives, concrete results, is managed and conducted as a series of projects. Nowadays, at internal as well as international level, engineering contributes, with an important percentage, to the society progress and ensuring the environmental and life quality, an engineer being considered as a “change manager” [12]

The project is a dynamic process whose time and cost constraints conditions the preparing of a detailed project plan, which specifies the starting point, strategies followed and results obtained. Interdependence between work packages in the project, how they relate and condition each other sometimes raises tensions and may lead to conflicts. The general term designating all the tension, the causes and effects of is stress. Stress is an imbalance between the demands imposed and the available resources to resolve those requests.

In the project, stress can occur due to a multitude of internal and external factors. In terms of internal tensions, conflicts may arise in the human plan, at project team level or in the material plan in the inadequate resources organization or structure. Study of individual and organizational stress has become a necessity given that the stress level conditions the quality of the activities [2]. Stress study provides a better way of understanding stress generators and their effects on human body and proposes methods and techniques to cope with negative stress.

Traditional project management relied on an approach based on linear cause-effect relationships. Modern project management offers a perspective and a systems approach whereby projects are seen as a "whole" complex unit, characterized in particular by a two-way relationship. This means that instead of being considered the "input" problems (input actions) and "output" problems (output actions), it should be seen as coming from the entire set of information reception and response, its control and process control, feedbacks and assessment. Through this broad perspective more accurate and complex results are obtained than traditional methods, especially if changing and adapting to environmental variables is seen as a continuous process and not as a creator and uncontrollable risk factor.

2 STRESS TYPOLOGY IN PROJECTS

In recent decades the field has intensified research on stress. What is stress, how does it appear, what can be done when the organism is filled and no longer can deal with the situation, these are fundamental questions the researchers sought to answer [3].

According to R. Lazarus, stress occurs when an individual perceives the external environmental demands as beyond his power. Later, along with Lazarus, S. Folkman proposes in one of their works, the idea that stress can be seen as the result of "imbalance between demands and resources" or as a result of "pressure that exceeds the power supposed to be held".
The stress generator, in specialized terminology, is a stimulus, a trigger event that causes the manifestation of stress. Stress generators have positive or negative value, but are neutral. The positive or negative valences are the effects of these stressors on the individual. There is internal, external, situational and development stress.

To cope with is the process of solving problems that an individual uses when faced with a stressful event or situation.

Adaptation is also a complex process by which the body changes some parameters depending on the environment in which it is located. These adjustments appear as results of stress.

According to a study by NASA stressors can be integrated in sets of categories.

1. Significant changes in their lives. This group of stress refers to any critical changes, pleasant or unpleasant.

2. Routine. Whether fighting with traffic or a deadline approaching, the body consumes energy to exhaustion. While these activities are common causes of stress the cumulative effect is often ignored.

3. Unrealistic expectations of themselves. While the reasons for positive expectations and directs energy to achieve goals, unrealistic expectations can lead to failure and impairment of self-esteem and confidence.

4. Interpersonal relationships. Maintain personal and professional relationship requires effort. Communication deficiency can lead to frustration, hostility and open conflict. Besides these categories, the study also proposed to NASA and other common types of stressors, such as family problems, illness, financial problems, communication problems, loss, addictions, time management and change management.

Whether it is chronic stress, fear, irritation or even abuse of various kinds on the body, everything is the result of stress. Recent studies show that stress affects three broad categories of life: individual, organization and society. Therefore, stress is individual, organizational and societal.

There is a two way process of influence between stress and conflict. In the same way that conflict generates related stress effects, stress from a particular direction may cause conflicts elsewhere. For example, the accumulated stress at work can cause irritability and aggression increase or decrease the degree of empathy and sympathy to family relationships, which creates a state of tension and can lead to conflict. Similarly, family conflicts that arise can generate a state of acute stress which may manifest itself through lower productivity at work, loss of attention etc.

<table>
<thead>
<tr>
<th>Stress type</th>
<th>Cause</th>
<th>Symptoms</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>Impersonal and intrapersonal pressures, poor communication</td>
<td>Insomnia, changes in diet and behavior, irritability</td>
<td>Mental or physical illness, irritability, aggressiveness, over-excitability, lack of motivation, loss of self-esteem</td>
</tr>
<tr>
<td>Organizational</td>
<td>Increasing the number of tasks and responsibility, poor relationships</td>
<td>Increase of illnesses or absenteism, work related accidents, decreased productivity and decreased quality</td>
<td>Sales drop, resignations, loss of customers and investors, domestic discontent</td>
</tr>
<tr>
<td>Societal</td>
<td>Economic status, high rate of crime, unemployment, immigration</td>
<td>Overall tension status, financial instability, corruption, distrust of state systems, skepticism, ignoring clearance</td>
<td>Increased pressure on state public services, lack of social programs, lack of jobs, social conflicts</td>
</tr>
</tbody>
</table>

3 STRESS MANAGEMENT IN PROJECTS

Stress management includes methods and techniques designed to induce, at individual level, reactions and mechanisms in order to cope with stress emerged as psychological response of the individual to internal and / or external agents that can cause stress.

One may speak of a fair and effective management of stress when the stress situation is improved or even eliminated. However, stress management kicks into action when the person calls a set of strategies to cope with stress, to avoid or reduce the effects of stress, to eliminate the emotional tension, to improve behavioral reactions
and induce the state of physical and psychological comfort.

In organizational understanding, stress management consists of systematical interventions that are designed to minimize the impact of stressors on the project team. They can focus on the individual, with the aim of helping it to form a set of methods and techniques to cope with stress factors, or an organizational focus, in order to reduce the number and impacts of environmental stressors at organizational level.

Stress management has started and developed on the idea that stress is not a direct response to stressors, but rather the ability to manage resources and ability to mediate individual responses to stressors. Since the parameters of these resources can be modified, it creates the possibility to control stress [4].

To develop an effective program for stress management, it is necessary first to identify the central factors that help a person or group to monitor their stress levels, and to know the most effective methods which can operate in such factors. Stress in Lazarus and Folkman’s interpretation focuses on the transactional process between people and the external environment (Transaction Model). The model perceives stress as a result of the relationship between how stress is measured or estimated and how the person assesses or estimates the resources assumed to be covered. Transactional model breaks the relationship stressor - stress and suggests that:

1) if stressors would be perceived as positive challenges rather than threats;
2) and the stressed person is confident that it has adequate resources then the stress would not necessarily occur as a result of the presence of a stress factor.

Transactional stress model states that stress can be reduced if people are helped to change their perceptions of stressors, whether their strategies are offered to help them cope with stress and stressed people are helped to improve self-esteem and rely on their own forces. There are a variety of stress management techniques. Some of the most effective methods of stress reduction are closely linked to the concept of time management. Other techniques involve assuming limits.

For stress reduction practices to be more efficient and have visible results is necessary that measures are to be taken simultaneously at individual and organizational level.

At the individual level, methods and techniques of cognitive therapy can be apply (especially to those who show anxiety and depression), conflict resolution, exercise, relaxation etc. At the organizational level, the main methods used are related to working conditions, workload, counseling, training, work pace, deadlines, job requirements and choosing the right person for the right job.

In principle, stress assessment and choice of intervention method should be made according to the specificities of the institution or the individual requesting them.

Other methodologies for evaluating the effects of stress and intervention strategies may include pre and post stress emergence, comparisons between individuals or groups in similar situations, tests indicating the extent to which subjects accept and follow the strategies, selection of appropriate measurement instruments for each case [5].

The reality of globalization and competitive organizational life, international and multidisciplinary projects suggests the changing of the parameters for training and manager assessment. To succeed is not enough just to prove intelligent. You must be emotionally intelligent.

The two promoters of the concept of emotional intelligence were american psychologists Peter Salovey and John Mayer [7]. In their perception, emotional intelligence refers to a set of learned skills to perceive, understand and express feelings in a clear way and to control these emotions so they work for us, not against us.

Relevant terms:

- Emotional Intelligence (EI) - describes the ability or capacity to own perceived self-control and can manage one’s emotions, others or the group’s.
- Emotional Intelligence Quotient (EQ) - the measurement of emotional intelligence.

Emotional intelligence (EI or EQ) refers to:

- know the answer to the question "why" and "how" I and others feel and what measures have to be taken;
- learn to discern between what is good and evil and how to get from bad to good;
- emotional awareness of their own learning, sensitivity and a set of management capabilities that will help minimize the occurrence of stress.

One of the main reasons why the concept of them was taken into account in management, was the relationship with stress and recognition of the potential for neutralization of its effects through the effective management of EQ [11]. Research has shown that improving of EQ skills reduces tension in staff communication and networking within organizations, thereby maximizing the results of work efforts.

From the social point of view, numerous investigations have revealed a strong link between
emotional intelligence and stress levels [9]. The proportionality between stress levels decrease with the increasing level of EI can be explained by the fact that EI is responsible for evaluating and controlling emotions over others. Research has shown that two thirds of the problems related to stress arise from abusive, poor or limited relationships with others [6]. EI is a component of the personality that regulates and manages stress by neutralizing its effects. Emotional intelligence is responsible for developing the potential of happiness, empathy, trust etc. And can combat the demoralizing effects of stress, such as isolation, loss of motivation, depression.

Regarding the project team research has shown that the link between members EQ and positive results in their work is more powerful [10]. Improper management of stress mainly by the project director, but also by all team members will lead to disease and illness, lower efficiency and quality and will be the main reason for absenteeism at work or refusal to work on the same team [8]. By contrast, employees who show a high EQ are more likely to get the top hierarchy of organizations and have better results in terms of performance and quality of work.

4 CONCLUSIONS AND RECOMMENDATIONS ON STRESS MANAGEMENT

Stress can’t be completely avoided. It is part of life and is even beneficial in small doses to keep the body ready to respond to environmental demands. To avoid or diminish the effects of stress, however, several ways to combat it need to be known.

Methods and techniques to combat stress, include but are not limited to: stress awareness, avoidance of people or situations known cause stress, sports or physical exercise, time management and change management, boosting self-motivation and self-respect, learning relaxation methods like meditation, breathing techniques, positive thinking, etc.

On a personal level, complete stress prevention is not possible, and is not recommended, because stress is a catalyst for growth and human creativity.

As each person becomes stressed for whatever reason, it experiences stress differently than others and therefore effective methods and techniques to combat stress will also be different depending on the nature and number of stressors, but also depending on the extent to which the person can manage their stress. In general, a number of changes in attitude and behavior works satisfactorily to most people affected. But researchers found that the best way to prevent stress on the individual is learning a model of proactive attitudes and behavior, prevention of stress or cope with stress during childhood.

Regarding stress in projects, most do not list specific differences between key processes of project management and stress management. Because stress has a major impact on the successful delivery of project results to the beneficiary, the stress analysis in projects should be considered paramount, as it is manifested in the project team. As a result, due to the stress appearance at physical or psychological level among project team members, there may appear unexpected side effects that may not be anticipated, but may affect activities.

It is vital that the project manager focuses on direct contact and manage tensions, conflicts and stress by various methods, including but not limited to: improving emotional intelligence competencies, time management and promotion of change, stimulating the respect for self and others, maintaining positive interpersonal relationships between team members through open and effective communication and maintaining motivation through appropriate rewards.

Systematic and controlled stress management minimizes negative effects on individual level, which will automatically lead to growth and positive value results, labor efficiency, increase productivity and quality in projects.

References