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Health Risks Associated with Working Related Stress
with Working Relationships

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Work-Related Stress with Working Relationships

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Since the mid-fifties when stress was introduced into America, the concept has been wholeheartedly embraced by popular culture. In the present, stress often overpowered its actual definition. Stress is an state of mind, and a physiological phenomenon. Attention to stress tends to run in circles, usually sparked by a scientific discovery. Medical personnels found observations, and introduced Type A and B personalities, and somewhat linked stress and heart disease.

Work Related Stress is the leading cause of occupational ill health in the US. It is believed to be a stressful role through headship that there is little current research into stress and working relationships. Here we will investigate prevalence and causes of self-reported working relationships and work related stress in the US.

People are often challenged when dealing with co-workers, and feel in competition with work. Also, the challenges of not getting along with co-workers can cause stressful situations. To many organizations in our working world, can cause these stressors to be unveiled. With this type of stress comes failure, not to the organization but to the selected individuals who are in these challenges. This failure is known to many as a mental illness which is caused by the stress of the challenges of working with co-workers, or those that put on themselves as individuals for the recognition and acceptance by the other fellow co-workers at their organization.

People are sometimes in competition with others to be the best that they can be in there current position. Workers sometimes ask for more responsibilities to get that promotion or get ahead of the others, hich in return will lead to more responsibilities and for the individuals to work under pressure. The competition or the not getting along with the co-workers can put huge mental strain on an individual. Co-workers all make mistakes in achieving a personal goal when all of the competitions with others to come up with the expectations of the organization. The expectations can hurt each co-worker mentally. It can cause anger or frustration because the deadlines approach that each of them set for themselves.

There are three types of stresses, acute stress, episodic stress and chronic stress. Acute stress occurs when major events take place in the individual's life. This could come from changing positions, or experiencing change in job tasks. Also, individuals may feel stressed when things go wrong or unexpectedly changes appear. Although, this type of stress is mostly short-term and does not cause damage to the body as do long term stress. When acute stress is experienced, the body should normally rest after the stressful events are over. If acute stress is a more revolving experience, the individual may feel like their life is out of control and disorderly. ChronicStress is a stress that is ongoing for a longer period of time. This type of stress seems endless and wears an individual down. It is an ongoing stress that may become part of the individual's life and they may not even recognize that they are under chronic stress. The chronic stress could be the result of traumatische experiences that have changed the brain and become

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internalized causing stressful feelings. (Hutman, Sheila, Jaelline Jaffe, Ph.D., Robert Segal, M.A., Heather Larson, and Lisa F Dumke, M.A. December 2005).

The History of Stress

The concept of stress has been in existence as early as the 14th century to mean hardship, straits, adversity or affliction. In the late 17th century Hooke used in the context of the physical sciences. However, this usage was not made systematic until the early 19th century. The concept of stress and strain (the deformation or distortion of the object) was used to be the basis of ill health in medicine. Walter Cannon in 1932 researched the physiology of emotion and considered stress to be a disturbance of homeostasis under conditions of cold, lack of oxygen, and low blood sugar. Cannon referred to his subjects as being "under stress". This implied that the degree of stress could be measured. (Folkman S. & Lazarus R 2). Cannon demonstrated the "flight or fight" response that humans and animals have when they are threatened. They traced these reactions to the release of a neurotransmitter, nor-epinephrine, from a part of the medulla of the adrenal gland. Harold G. Wolff in the 1940s and 50s regarded stress as a reaction of an organism overwhelmed by the environmental demands. (Folkman S. & Lazarus R 2).

Claude Bernard, The French Physiologist, derived the concept of dynamic equilibrium. He indicated that in dynamic equilibrium, a steady state in the internal body environment is necessary for survival. External change in the environment or external forces that change the internal balance must be reacted to and compensated for if the organism was to survive. Hans Selye, whose definition of stress is mentioned above, indicated that the pituitary gland at the base of the brain determines a body's response to stress. Selye's did a variety of different experiments with rats, inducing stress in them to observe their responses. The rats reacted psychologically and physically to the adverse situation that were imposed on them. Those undergoing constant stress, had an enlargement of their adrenal glands, gastrointestinal ulcers, and atrophy of their immune system. He coined these responses as the General Adaptation Syndrome because the responses the rats had were normal for the organism in warding off stress, however, they could become much like illnesses. "If these adaptive processes were excessive, the body could become damaged". (MedicineNet 2002). Selye's experiments with the rats was a stepping stone into understand the connection between how the body reacts to abnormal or excessive stress imposed upon it. In order to fully comprehend this reaction, it is important to understand how the brain actually conducts under stress. After all, 90% of illness is stress-related (Hutman, et al December 2005).

How the Brain Functions under Stress

Once the sensory organs perceive information they send it via nerves to part of the brain called thalamus part of the brain which deals with sensory perceptions. Thalamus transmits the information to the cerebral cortex. The cerebral cortex is a large layer of brain tissue, "enfolding" the rest of the brain. Cerebral cortex is where the process of conscious thinking and decision

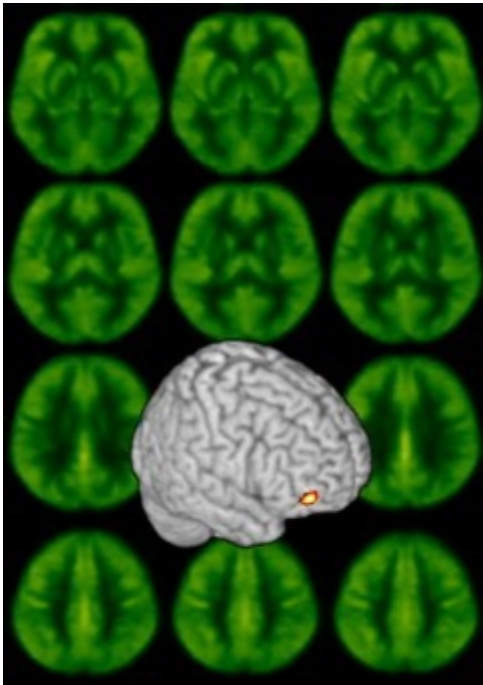
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making happens. This information is interpreted, filtered and understood. The cerebral cortex is where "becoming conscious of reality" happens, but it also processes large quantity of information, without us being aware. The cerebral cortex "judges" which information can be dealt with automatically, without our awareness and which needs to be consciously assessed. (http://www.azstarnet.com/~sunrise/horse/Pagosa_Springs/imprinting.html)

The limbic system is stimulated next by the cerebral cortex. The limbic system is of equal importance to our conscious life - it is responsible for emotions, feelings, character traits and behaviour. Without it we will be just a sophisticated brand of computers - emotionless, with no feelings and no personality. The limbic system sends signals back to the thalamus, which this time arouses the hypothalamus to secrete neurohormones which will stimulate the pituitary gland and the stress reaction will begin. (http://www.azstarnet.com/~sunrise/horse/Pagosa_Springs/imprinting.html)

In very rare cases of hyperstress the thalamus may send signals directly to the hypothalamus and trigger the stress reaction without the participation of the cortex and the following stimulation of the limbic system. Of course many other centres of the brain take part, the above mentioned are only those with fundamental importance to brain functioning in general. After the brain perceives and estimates the stressor, it triggers automatically the stress reaction and soon receives feedback from the organism, about the changes in its metabolism. (http://www.azstarnet.com/~sunrise/horse/Pagosa_Springs/imprinting.html)

Feedback to the brain can be a secondary stressor, with much greater impact than the initial one. A perfect example would be that of a person who tries to execute a defensive, in the case of stress physical task and his body rejecting to follow the orders of mind. Hardly there is a secondary stressor, which causes so much panic, than the awareness of your body incapable of doing what your mind wants. (http://www.azstarnet.com/~sunrise/horse/Pagosa_Springs/imprinting.html)



Scan picture of Brain Under Stress

Signs and Symptoms

There are several factors associated with working relationships that could cause one to have stress. There are intrinsic factors such as challenges between individuals, the work load that could cause stress. Other factors such as the role one has in the organization, the chance for career development or even their relationships at work with others affects the way we deal with stresses in our lives. Symptoms of stress can be multiple such as:
(http://www.helpguide.org/mental/burnout_signs_symptoms.htm)

Powerlessness
Hopelessness
Emotional exhaustion
Detachment
Isolation
Irritability

Frustration
Being trapped
Failure
Despair
Cynicism
Apathy

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Stress

Characterized by overengagement
Emotions are overreactive
Produces urgency and hyperactivity
Loss of energy
Leads to anxiety disorders
Primary damage is physical
May kill you prematurely

HFE Countermeasures in Support of Improving Stress

The most effective way to head off job related stress with co-workers is to quit the competition. Whether it means clarifying your job description or bringing yourself down. But if that isn't an option for the individual, there are still things they can do to improve the situation, or at least the state of mind for the individual.

In order to avoid job stress, it is important to reduce and manage stress at work. Start by identifying what factors are involved. Then the individual can take steps to deal with the problem, either by changing the work environment or changing the way the individual deals with stressor.

Employers have general health and safety responsibilities for their employees and others. This includes assessing and managing the risks of psychological and emotional harm to employees from work related stress. It also means identifying those activities that are likely to be adversely affected by the effects of employee stress or unplanned pressure challenges. Having identified such risks the duty of care then requires the planning and organizing of work activities to minimize the risks.

Human Factors Engineering is about designing work and workplaces so that people can carry out their duties effectively and efficiently, without experiencing discomfort, becoming ill or making mistakes due to poor job or equipment design, or negative organizational influences. The nature of job, the organizational context and the individual characteristics required all influence individual performance. A systematic human factors/ergonomics approach would involve an analysis of: <http://www.hse.gov.uk/humanfactors/stress.htm>)

- The job design (tasks to be done) and how it relates to the other jobs & tasks. This includes looking at workload (physical and mental), work patterns, information and communication needs, job role and amount of personal discretion, equipment design and the work place environment. Getting these

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aspects right can be especially important where the work is safety-critical or involves safety-critical decisions;

- The knowledge, skills and abilities required to carry out the work. Differences in competence can, to some extent, be minimised through appropriate selection and subsequent training. Other individual differences such as personality, health status and domestic circumstances are more often addressed through appropriate management;
- The organisational context within which the work takes place. Much of this relates to the organisational culture and takes into account working relationships between relevant workers, teams and managers (e.g. are they supportive or antagonistic?). Another aspect concerns whether the right level of practical support is available in the form of resources and management sponsorship, for example. Also, since few organisations remain static for very long, then whether change is planned and managed effectively is also important.<http://www.hse.gov.uk/humanfactors/stress.htm>)

To make things simpler, HSE has identified six key areas of work design that can give rise to work-related stress if they are not properly managed. These key areas (demands, control, support, relationships, role and change) are covered in detail in HSE's Stress Management Standards, which offer practical advice on managing the risks of work-related stress. The Stress Management Standards are based on known good practice and an organisation that is addressing the six key areas is likely to be also managing the risks of work-related stress.
<http://www.hse.gov.uk/humanfactors/stress.htm>)

The six areas that HFE as identified as contributing to work-related stress are all factors that influence worker behaviour (a human factors specialist may refer to them as performance shaping or influencing factors). Applying ergonomic principles that take account of human capabilities and limitations and the influences upon them can reduce many of these stressors.
<http://www.hse.gov.uk/humanfactors/stress.htm>)

Conclusion

The work world has changed dramatically throughout the years and so have the degree levels of stress. There are many ways an individual can reduce stress for themselves, and throughout this paper and the references available it is talked about how stress can be managed. There are ways an organization can help in providing stress to become minimized for their employees. Many organizations can help in the elimination of stress related to working relationships. There are many things that can be the cause of stress through the working relationships, but organizations can make things easier and less competitive for the employees as you have read in the above. Employees are stressed through many ways other than just working

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relationships but by employees themselves taking a jump to help eliminate this stressor things can be minimized by organizations taken action to help their employees.

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References:

Retrieved from the world wide web April 3rd, 2008, (2008)
<http://www.hse.gov.uk/humanfactors/stress.htm>

Better Health Channel. (October 2005). Anxiety disorders - overview
http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Anxiety_disorders_overview?OpenDocument

Canada Safety Council (2005). Mental Health and the Workplace.
<http://www.safety-council.org/info/OSH/mentalhealth.html#Anchor-Depressio-30958>
Carone P., Kieffer S., Krinsky L., Yolles S.,(1984). Stress and Productivity Volume IX. New York, NY: Human Sciences Press.

Curci, Linda. (2004). Burnout. <http://www.counseling.caltech.edu/articles/burnout.html>.

Driskell J. & Salas E. (1996). Stress and Human Performance. Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.

Folkman S. & Lazarus R. (1984). Stress, Appraisal, and Coping. New York, NY: Springer Publishing Company.

Franklin Institute Online. (2004) Renew - Stress on the Brain
<http://www.fi.edu/brain/stress.htm#stressmemory>

Group, Edward F.III, DC, ND, DACBN. (2006). Anxiety Attacks. <http://www.stress-anxiety-depression.org/anxiety/anxiety-attacks.html>

Hansen, Randall S. Ph.D. (2006) Managing Job Stress: 10 Strategies for Coping and Thriving at Work. http://www.quintcareers.com/managing_job_stress.html.

Hiramatsu, Kimiko, Junko Nagasawa, Yuka Hirai, Sumiko Iyama, Rumiko Nagami, Keiko Kurashiki, Miyoko Matsuo and Tadasu Ikeda (2002). Stress Tolerance in Subjects with Myocardial Infarction. http://lib.med.tottori-u.ac.jp/yam/yam45-2/45_043-047.pdf

Jaffe, Jaelline Ph.D., Dumke, Lisa Flores, M.A., Hutman, Sheila., and Segal Jeanne Ph.D., contributed to this article. (March 2006). Job Stress Management / Workplace Stress Reduction. http://www.helpguide.org/mental/work_stress_management.htm