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## Occupational Stress: Some Background with Ideas for Organizational Change

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## Occupational Stress: Some Background with Ideas for Organizational Change

### Abstract

[Excerpt] What is stress? Dr. Hans Selye, an early researcher on stress, defined it as “the wear and tear caused by living.” Since it is part of life, we cannot avoid it – at work and in our personal lives. In today’s world, we experience situations and circumstances that are typically not really life-threatening. Or we worry about things that might happen or go wrong, but may never actually occur. Our bodies respond to these situations using our natural survival mechanisms – yet these can be an over-response because they evolved to deal with life-threatening events. In many ways, you could say that we are living in the bodies of our ancestors, but in a very different world. We inherited the adaptive responses that enabled them to survive...

### Keywords

occupational stress, organizational change, coping mechanism

### Comments

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## Occupational stress: some background with ideas for organizational change

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January 31, 2019

What is stress? Dr. Hans Selye, an early researcher on stress, defined it as “the wear and tear caused by living.” Since it is part of life, we cannot avoid it – at work and in our personal lives. In today’s world, we experience situations and circumstances that are typically not really life-threatening. Or we worry about things that might happen or go wrong, but may never actually occur. Our bodies respond to these situations using our natural survival mechanisms – yet these can be an over-response because they evolved to deal with life-threatening events. In many ways, you could say that we are living in the bodies of our ancestors, but in a very different world. We inherited the adaptive responses that enabled them to survive...

- short-term problems, such as the attacks of wild animals
- long-term problems, such as weather extremes, food deprivation, or environmental catastrophes

How your body responds to a short-term stressor is an alarm reaction, commonly called “fight or flight,” when perception of imminent danger triggers the body into action. This alarm reaction begins in the hypothalamus of brain and leads to the release into the bloodstream of hormones such as adrenaline, producing:

- surges in heart rate that increase the heart’s pumping ability, delivering additional power and blood volume at a moment’s notice
- elevated blood sugar levels that supply instant muscle energy in times of emergency
- diversion of blood from the digestive organs to the skeletal muscles allowing for a quick getaway or knockout blow
- faster blood clotting, to reduce the likelihood of bleeding to death from wounds
- widening of the eye’s pupil, so as to admit more light and thus heighten visual awareness
- increased breathing rate, so that more oxygen is available to the body’s vital organs
- stimulate production of endorphins which decrease body’s sensitivity to pain
- increased hearing awareness

This rapid response enables us to defend ourselves or to escape – both of which may be inappropriate in the workplace when a situation is not life-threatening. (For example, punching out your co-worker or your boss is probably not going to help your career.)

Since the 1930s, it has been assumed that humans and many animals of both sexes respond to acute stress with a “fight or flight” response, but recent research has challenged that view by observing that the vast majority of animals used to investigate stress were male and, in human experiments, women constituted only about 17% of participants. A review of 200 studies on stress behavior and physiology indicated that women and females of numerous other species employ a different response referred to as “tend and befriend” and characterized by: **“Tending”** – nurturing activities designed to protect the self and offspring which promote safety and reduce distress, and **“Befriending”** – which involves the creation and maintenance of social networks that may aid in this process.

Evidence from animal and human studies suggests that the hormone oxytocin, in conjunction with female reproductive hormones and other body mechanisms, may be at the core of this response. Oxytocin is secreted at high levels in women during childbirth and aids in labor, but is also produced in both sexes by stress and exerts a calming influence. Estrogen seems to amplify this calming effect, whereas androgens (such as testosterone) apparently diminish it.

Our individual stress reaction to a stressor is heavily influenced by our personal experiences and history, in other words, by our memories of similar stressors. You can see this for yourself by thinking of a memory or event that happened in your childhood...

...does it have a strong emotion associated with it?

...is that emotion positive or negative?

You probably remembered a memory whose associated emotion was negative – you were scared, upset, anxious, etc. This appears to occur because the brain processes new information by sending it through an emotional processing center to determine the appropriate emotional tag (response). Then the information goes to permanent storage. Thus, everything we learn or experience has an emotional piece to it. We remember most strongly those memories with the strongest emotional tags. The brain has a negative bias: we respond more strongly to negative events than to positive ones and this probably improves our survival. Anticipating danger or problems enables us to plan for, respond, and avoid or minimize them.

We are exposed to many stressors, both good and bad. It all depends upon our perception of what is going on and our coping skills. So, it is not the circumstance, it is our reaction to it that counts.

When this happens in the workplace and we wish we could run away, but that is not an option – we might feel fear. Or, if we wish we could fight but can't, we might become angry or frustrated. Sometimes our reactions are so confused, we panic and our thoughts or actions are so paralyzed we can't figure out what to do. We may have developed a habit of converting threat into challenge and we seek out assistance or resources to tackle the stressor. You may have developed a method for coaching yourself so as to reduce the threat in your mind – we do this when we picture the stressor in a different way or with humor. (We know the threat isn't being reduced in reality, but maybe it helps if you are very nervous about having to speak in public and a friend suggests that you picture the audience in their underwear.)

While a stressor could be a single or occasional event, what if the stressor goes on for a long period of time because it is typical of your job -- whether a workplace condition or a personal interaction? In this case, our alarm system can become overloaded and confused. The body finally rebels against being uselessly switched on and off and, instead, remains stuck in the "on" position – switching to a condition of chronic stress. Unfortunately, if you live in a prolonged state of alarm, so-to-speak, the body has a survival mechanism to deal with that, but it involves a trade-off -- some body systems are sustained while others, such as upkeep and repair, are neglected. Chronic stress can reinforce your vulnerability in areas where you have previously sustained an injury (such as in the heart or blood vessels) or where you have an inherited weakness. One example of a chronic stress mechanism is that the pituitary gland at the base of the brain stimulates the adrenal glands to release the hormone cortisol into the blood stream. While cortisol typically rises and falls on a 24-hour cycle, chronic stress causes it to remain at a higher level all the time, which produces:

- irritability and hyperalertness
- fat storage for both insulation and energy reserves
- salt retention
- blood pressure elevation
- loss of essential minerals such as potassium and magnesium
- erratic heart rhythms
- increased fats and cholesterol in the bloodstream
- increased stomach acid
- depression of the immune system, especially for fighting viral infections
- suppression of the sex hormones

Chronic stress has also been shown to decrease the rate of new nerve cell production in the hippocampus, causing this part of the brain to shrink in size – one potential cause of depression. This can produce difficulty with learning and remembering, even in people going about their daily routine.

One option for dealing with stress is to teach the person experiencing the stress how to cope with or adapt to the stress. *This option assumes that the problem is with the individual.* In the U.S., stress research has been frequently focused on person-oriented cures, leading to relaxation therapy, humor therapy, and self-awareness therapy to deal with stress. These efforts concentrate on the person's biology, psychological traits, and individual behavior and lifestyle – and are certainly extremely helpful and valuable.

Another option is to change or modify the stressor itself. *This option assumes that the problem is with the condition, event, or person that causes the stress.* Research tends to support the conclusion that it is not the demands of work itself which adversely affect health, (work that is demanding, within limits, is not the major source or risk), but the organizational structure which creates a lack of control over how one meets the job's demands and how one uses one's skills. (Focusing only on the person-oriented approach may happen because it seems to offer an easy alternative to complex and difficult labor-management negotiations over workplace control.)

### **What the organization can do to reduce stress**

Stressful working conditions are not necessary for a workplace to remain productive and profitable. As we saw above, chronic stress could result in serious health problems, especially for the cardiovascular system. Stressful working conditions are associated with increased absenteeism, tardiness, and intentions by workers to quit their jobs – all of which have a negative effect on the bottom line, **money can be a powerful reason to use with your employer.** The following characteristics have been associated with both healthy, low-stress work and high levels of productivity:

- recognition of employees for good work performance
- opportunities for career development
- an organizational culture that values the individual worker
- management actions that are consistent with organizational values

Survey data gathered from employees working in companies that are financial performance leaders and that show a high regard for employees are more likely to find them willing to go above and beyond the formal requirements of their jobs, pour extra effort into their work, and

deliver superior performance. High performing companies demonstrate the value they place on their people by being open and honest in communications and showing concern for employees' health and safety. Employees give these employers high marks for taking employee interests into account when making decisions and informing employees of reasons behind decisions that affect them. High performing companies leverage the skills and capabilities of their people by giving them broad latitude in carrying out their job responsibilities. For organizations looking to harness the full productivity of their workforce, leaving employees' potential motivation untapped is a wasted opportunity – **another argument employees could use to promote addressing occupational stress.**

If you think that your workplace could use a job stress intervention strategy, **start by identifying the problem:** you could use NIOSH's quality of work life survey (available at [www.cdc.gov/niosh](http://www.cdc.gov/niosh)) or hold group discussions with employees to see what the issues are in areas of job conditions, stress, health, and satisfaction, then design your own survey. It is also helpful to collect objective data such as absenteeism, illness rates, turnover rates, or performance problem -- these are expenses that can justify the time and effort to address workplace stressors. As you review these survey results and data, it should be possible to identify problem locations and stressful job conditions.

**Then you can work with your employer to target source(s) of stress for change.** For example, a hostile work environment may require organization-wide interventions; an excessive workload may need redesign of a job in specific departments. Proposing and prioritizing intervention strategies may involve using a joint labor-management team and/or consultation with outside experts. Then you can communicate the planned interventions to employees and begin implementing them.

**So, how are the intervention strategies working out?** You could survey employees again to see if their perceptions of job conditions, stress, health, and satisfaction, etc. have changed. It is especially valuable to include objective measures – did absenteeism, illness rates, turnover rates, or performance problems decrease – as an employer is especially likely to pay attention to these items as they impact the bottom line. You may find it useful to conduct both short- and long-term evaluations, as some solutions may take a while to show results. Then you can refine your intervention strategies and improve them. Below is a table of some potential risk factors for stress and ideas for interventions in the workplace.

Certainly, some potentially stressful circumstances may have resulted from organizational restructuring and increased reliance on nontraditional employment practices, such as temporary workers and contractor-supplied labor. For some people, many of today's jobs may hold the potential for improved satisfaction and well-being in the workforce because of their increased flexibility, responsibility, and learning opportunities. While this issue goes beyond the scope of this article, it is important to keep in mind that these dramatic changes have far outpaced our understanding of their implications for work-life quality.

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RISK FACTOR	IDEAS FOR INTERVENTIONS IN THE WORKPLACE
work schedule	<ul style="list-style-type: none"> <li>• provide flexibility.</li> <li>• for shifts, schedules should be stable and predictable; always move forward with the clock not against it.</li> </ul>
workload and workplace	<ul style="list-style-type: none"> <li>• demands should be matched with the capabilities of the individual.</li> <li>• increased control over the pace of work reduces stress.</li> <li>• address problems of understaffing.</li> <li>• practice better planning.</li> <li>• provide recovery time from demanding mental tasks.</li> </ul>
role conflict/ambiguity	<ul style="list-style-type: none"> <li>• jobs should be well-defined with job descriptions updated regularly</li> <li>• clarify issues of conflicting demands; e.g. whose work or what project takes priority?</li> <li>• improve routine communication</li> </ul>
lack of participation in decision-making	<ul style="list-style-type: none"> <li>• provide opportunities for employee involvement – a means for input from all levels of the organization</li> </ul>
quality of management and supervision	<ul style="list-style-type: none"> <li>• improve recognition of employee contributions</li> <li>• improve sensitivity to individual needs, within and outside of the job</li> <li>• improve communication</li> <li>• consistency in policies</li> <li>• avoid discouraging employees from using their benefits and employer programs.</li> <li>• expand benefits and programs that reduce work/family stress.</li> </ul>
contact with the public or customers	<ul style="list-style-type: none"> <li>• improve workplace layout to avoid crowding &amp; lack of privacy (within reason for job).</li> <li>• communications training to avoid escalation of conflict.</li> </ul>
discrimination	<ul style="list-style-type: none"> <li>• address sexual, racial, age discrimination</li> </ul>
job security uncertain	<ul style="list-style-type: none"> <li>• provide clear, timely communication concerning the organization's future</li> <li>• provide outplacement assistance</li> </ul>
career uncertainties	<ul style="list-style-type: none"> <li>• provide opportunities for advancement, career development</li> </ul>