

REVIEW ARTICLE

STRESS AND COPING WITH STRESS: A REVIEW

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In medical parlance 'stress' is defined as a perturbation of the body's homeostasis. This demand on mind-body occurs when it tries to cope with incessant changes in life. Stress is a concept invented in the 1930s by Dr. Hans Selye.¹ Dr. Selye admitted that stress is an abstract concept, and he admitted that stress has never been adequately defined. Dr. Selye's own definition of stress is *the non-specific response of the body to any demand*.²

Confusion about the concept of stress:

Dr. Selye erred when he named his creation "stress."³ He had meant to make an analogy with the mechanical engineering concepts of stress and strain. Stress is the measure of a force that changes the length of an object (like a beam or strut), and strain is the resulting deformation of that object. Stress in the health-context, therefore, is a metaphorical allusion to strain: Dr. Selye meant to refer to a reaction to outside forces acting on the body, rather than to the outside forces themselves. So he should have named his conceptual mechanism "strain" rather than "stress. At one point or the other everybody suffers from stress.

"Nothing gives one person so much advantage over another as to remain always cool and unruffled under all circumstances." —Thomas Jefferson

There seems to be a wide variety of life experiences, which result in some form of stress, fear, anxiety, or psychosomatic illness.

Causes of Stress

Environmental factors and processes

- Changes, such as sudden trauma, several big crises, or many small daily hassles, cause stress.⁴ Intense stress years earlier, especially in childhood, can predispose us to over-react to current stress.
- Events, such as barriers and conflicts that prevent the changes and goals we want, create stress.⁴ Having little control over our lives, e.g. being "on the assembly line" instead of the boss, contrary to popular belief, often increases stress and illness.
- Many environmental factors, including excessive or impossible demands, noise, boring or lonely work, stupid rules, unpleasant people⁴, etc., cause stress.
- Conflicts in our interpersonal relationships cause stress directly and can eventually cause anxieties and emotional disorders.⁵

Constitutional or physiological processes

The genetic, constitutional, and intrauterine factors⁶ influence stress. Some of us may have been born "nervous" and "grouches"

Learning processes

- Having a "bad experience" causes us to later be stressed in that situation, i.e. pairing a neutral stimulus (situation) with a painful, scary experience will condition a fear response to the previously neutral stimulus. (classical conditioning)
- Fears and other weaknesses may yield payoffs; the payoffs (like attention or dependency) cause the fear to grow. (operant conditioning)

Summary of the Effects of Stress and Anxiety

The effects or consequences of stress are also numerous; they are both positive and negative.

First, the desirable results:

1. We need and enjoy a certain level of stimulation...a certain number of thrills. It would be boring if we had no stresses and challenges. Some people even make trouble for themselves to keep from getting bored.
2. Stress is a source of energy that can be directed towards useful purposes. How many of us would study or work hard if it were not for anxiety about the future?
3. Mild to moderate anxiety makes us more perceptive and more productive, e.g. get better grades or be more attentive to our loved ones.
4. By facing stresses and solving problems in the past, we have learned skills and are better prepared to handle future difficulties.
5. Anxiety is a useful warning sign of possible danger--an indication that we need to prepare to meet some demand and a motivation to develop coping skills.

The negative effects or consequences of stress and anxiety

1. Several unpleasant emotional feelings are generated--tension feelings of inadequacy, depression, anger, dependency and others.
2. Preoccupation is with real or often exaggerated troubles--worries, concerns about physical health, obsessions, compulsions, jealousy, suspiciousness, fears, and phobias.
3. Most emotional disorders are related to stress;⁷ they either are caused by stress and/or cause it or both. Interpersonal problems can be a cause or an effect of stress--feeling pressured or trapped, irritability, fear of intimacy, sexual problems, feeling lonely, struggling for control, and others.
4. Feeling tired is common--stress saps our energy.
5. Many bad habits (e.g. procrastination and much wasted time) are attempts to handle anxiety. They may help relieve anxiety temporarily but we pay a high price in the long run.
6. Psychosomatic ailments result from stress--a wide variety of disorders are caused by psychological factors, maybe as much as 50% to 80% of all the complaints treated by physicians. Stress can cause headaches, irritable bowel syndrome, eating disorder, allergies, insomnia, backaches, frequent cold and fatigue to diseases such as hypertension, asthma, diabetes, heart ailments, migraine, grave's ophthalmology and even cancer.^{8,9}
7. Stress/stressful life events can precipitate a number of psychiatric disorders including conversion disorder¹⁰ adjustment disorder¹¹ acute stress reaction, and post-traumatic stress disorder,¹² generalized anxiety disorder^{13,14}, depression¹⁵ and somatization disorder.¹⁶
8. A study has shown 96% of subjects reported dissociative (conversion) symptoms in response to acute stress during U.S. Army survival training.¹⁷ Another study found that people experiencing acute stress disorder in response to a traumatic experience have stronger ability to experience dissociative phenomena than people who do not develop acute stress disorder.¹⁸ Severe levels of posttraumatic stress and depressive reaction were found in adolescents in two cities of Nicaragua affected by a hurricane.¹⁹ Similarly after another stressful incidence (series of sniper shooting in Washington) 6% of subjects met criteria for acute stress disorder, 13% reported increased alcohol use and 8% met criteria for depression.²⁰
9. High stress almost always interferes with one's performance (unless it is a very simple task). It causes inefficiency at school and on the job, poor decision-making, accidents, and even sexual problems. Anxiety and fear causes us to avoid many things we would otherwise enjoy and benefit from doing. People avoid taking hard classes, trying out for plays or the debate team, approaching others, trying for a promotion, etc. because they are afraid.

Optimum levels of stress

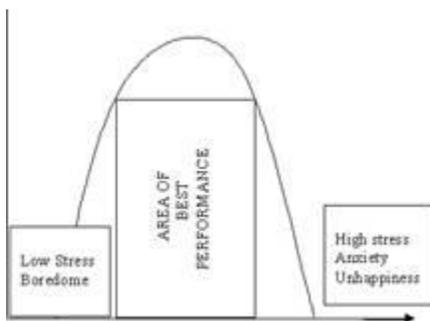
Experts tell us that stress, in moderate doses, is necessary in our life. Stress responses are one of our body's best defence systems against outer and inner dangers. In a risky situation (in case of accidents or a sudden attack on life), body releases stress hormones that instantly make us more alert and our senses become more focused. The body is also prepared to act with increased strength and speed in a pressure situation. It is supposed to keep us sharp and ready for action. Research suggests that stress can actually increase our performance. Instead of wilting under stress, one can use it as an impetus to achieve success. Stress can stimulate one's faculties to delve deep into and discover one's true potential. Under stress the brain is emotionally and biochemically stimulated to sharpen its performance.

Now I will explain the linkage between stress and performance, and show how you can ensure that you perform at your best by optimising stress levels.

The approach to optimising stress depends on the sort of stress being experienced. Strategies to deal with short term stresses focus on managing adrenaline to maximise performance. Short-term stresses may be difficult meetings, sporting or other performances, or confrontational situations. With long term stress, fatigue and high adrenaline levels over a long period can seriously reduce your performance. Optimising long term stress concentrates on management of fatigue, health, energy and morale. Naturally there is some element of overlap between these.

Short term stress

The graph in Fig: 1 shows the relationship between stress and the quality of performance when you are in situations that impose short-term stress: Where stress is low, you may find that your performance is low because you become bored, lack concentration and motivation. Where stress is too high, your performance can suffer from all the symptoms of excessive short-term stress. In the middle, at a moderate level of stress, there is a zone of best performance. If you can keep yourself within this zone, then you will be sufficiently aroused to perform well while not being over-stressed and unhappy. This graph, and this zone of optimum performance, are different shapes for different people. Some people may operate most effectively at a level of stress that would leave other people either bored or in pieces. It is possible that someone who functions superbly at a low level might experience difficulties at a high level. Alternatively someone who performs only moderately at low level might perform exceptionally under extreme pressure.



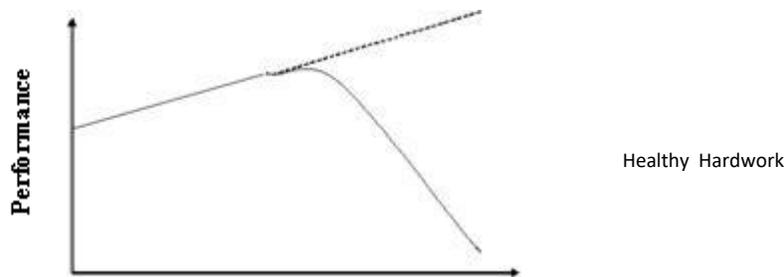
Performance

Stress

Fig: 1 The Relationship Between Stress And Performance

Long term stress

The problems of long term, sustained stress are more associated with fatigue, morale and health than with short-term adrenaline management. The graph as shown in Fig: 2 show the way in which performance can suffer when you are under excessive long-term stress:



Sustained Stress - - - - - Intended Performance
 _____ Actual Performance

Fig: 2 The Relationship between long term stress and performance

The graph shows stages that you may go through in response to sustained levels of excessive stress. During the first phase you will face challenges with plenty of energy. Your response will probably be positive and effective. After a period of time you may begin to feel seriously tired. You may start to feel anxious, frustrated and upset. The quality of your work may begin to suffer. As high stress continues you may begin to feel a sense of failure and may be ill more frequently. You may also begin to feel exploited by your organisation. At this stage you may start to distance yourself from your employer, perhaps starting to look for a new job.

If high levels of stress continue without relief you may ultimately experience depression, burnout, nervous breakdown, or some other form of serious stress related illness.

Different people may move between these stages with different speeds under different stress conditions.

Strategies for Coping with Stress

There are three basic strategies for coping with stress^{21,22} (other than ignoring or denying your problems). These are:

1. **The Band-Aid Approach**--using alcohol, drugs (prescription or illegal), cigarettes, food, sex, or anything else to temporarily relieve the symptoms of "stress." While these coping strategies "work" in the short-run, they have harmful long-term effects, which make them undesirable.
2. **The Stress Management Approach**---using diet, exercise, meditation, biofeedback, behavioural techniques or other relaxation exercises to cope with your "stress^{23,24}." While these coping strategies have definite advantages over band-aid methods, they still focus mainly on just the symptoms of your problems.
 - i. Eat sensibly. A well balanced diet will improve your ability to respond to stress appropriately.

Sleep-make sure you get an adequate sleep each night.

Tiredness. Cut down on stimulants—caffeine and nicotine don't help.

Exercise-Aerobic exercise can reduce anxiety by up to 50 %.

- v. Relax-Learn and practice relaxation techniques regularly.
- vi. Take time off---Go for a walk, listen to music, take a bath .you will feel better.
- vii. Prioritise-If you have multiple stress factors (deadlines, financial worries illness problems) concentrate on the 'must 'first and put 'shoulds' to the back of your mind for the moment.

3. **The Ideal Approach**-----making stress disappear, quickly and naturally, by modifying or correcting its underlying causes. While this is by far the best way to deal with problems in life, most people fail to use this approach because they incorrectly understand what causes their stress to occur.

In recent years, new insights about the causes of human stress have emerged.^{25,26} These new insights focus on the difference between obvious and non-obvious causes. Obvious causes of stress include the things that happen to us and around us--i.e. the things we easily see. Non-obvious causes include conversations and behaviour patterns that become triggered within our bodies. These include expectations, judgements, evaluations, needs for control, needs for approval, and many others.

The more you learn to recognise and deal with these non-obvious causes of your problems, the less stress, tension, and physical ailments you will likely experience.

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