Stress Syndrome: Cause, Symptoms and Coping Strategies

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Abstract

Stresses, which can be described as an organism's total response to environmental demands or pressures is conceptualized in this paper as a normal part of life that can help an individual learn and grow. The paper after reviewing some theories of stress from the perspective of the models of stress as stimulus, as response and as process; posits that stress has only one cause, namely: stressor. Stressors are those major events in an individual’s daily life that drains the emotions. These stressors differ by way of type, time of happening, situational context and intensity. Though stress can manifest itself physically, emotionally and/or mentally depending on the stressors and the types of changes or events being dealt with, the paper x-rayed the three major stages through which stress manifests. The paper concludes by discussing possible coping strategies, which can be employed in dealing with stress.

Introduction

Everyone experiences stress from time to time, so it is perfectly normal. However, normal doesn’t necessarily mean healthy. Nor is it inevitable! Believe it or not, you can learn how to largely eliminate stress. I don’t mean eliminate the pressures in your life - those will probably persist. The way I think of it, pressure is what is happening to you, but stress is how you react to those pressures. So, you can keep the pressure and get rid of the stress.


Many people talk about stress, but discussions with people as well as a search of the literature (Samiento, 2003; Wickens & Hollands, 2000; DiRamio & Payne, 2007) would indicate that it is often not clear what stress really is. While some consider stress to be an event in their lives (Brown & Harris, 1986; Brown, 1998), that is, something that happens to them, such as injury or the purchase of a new car, some others take stress to be what happened to our bodies, minds and behaviours in response to an event (Hilakvi-Clarke, et al., 1993; Irvine & Lum, 1997). In other words, stress can be physical, mental, behavioural or social in dimension.

By way of definitions, stress can be taken as:

- Any change to which an individual must adapt - our ever changing world opens up myriads of changes that an individual has adapt to and cope with.
- Any demand (force, pressure, strain) placed on the body and the body’s reaction to it – man is open to pressure and strains from time to time, and the demands of these pressures on the body, necessarily require the body and indeed the individual to act in response.
- An activation of the “danger alarm” system of the brain – this is a system every individual is born with, for the biological purpose of helping the individual prepare for dealing with real physical danger that will produce the fight or flight reaction.
• What happens when the pressure an individual is under is more than what the individual can cope with.
• A "nonspecific response of the body to a demand." Hans Selye, M.D., www.healthscout.com/ency/68/103/main.html -
• A physical, mental, or emotional factor that causes bodily or mental tension. Simply put, stress is any outside force or event that has an effect on our body or mind. www.time4thoughts.com/stress/definition-of-stress.htm
• Forces from the outside world impinging on the individual. Stress is a normal part of life that can help us learn and grow. www.medterms.com/script/main/art.asp?articlekey=20104 – 41k –
• The body's reaction to a change that requires a physical, mental or emotional adjustment or response. dying.about.com/od/glossary/g/stress_distress.htm - 21k
• Stress is defined as an organism's total response to environmental demands or pressures. Medical Encyclopedia
• Stress refers to a set of affective, cognitive, somatic, and behavioral manifestations within the range of functional integrity Louise Lemayre & Réjean Tessier,

From the above, stress can be thought of in terms of both the precipitating events, and the individual's reaction to the ability to cope. Stress itself ranges in intensity, from the negative extreme of being in physical danger to the joy of completing a desired goal.

Theories of Stress
Stress has been viewed in three ways: as Stimulus, as Response and as Process.

Stimulus Models and Life Events
Stimulus refers to stress, which can be categorized as emanating from three sources: (1) Catastrophic events, such as tornadoes and earthquakes, (2) Major life events and (3) Chronic circumstances, such as living in crowded or noisy conditions.

Applying the engineering approach, stimulus-based models view stress as an independent variable that disturbs the individual: it leads to distress. This approach led to a research tradition that concentrated on stressful stimuli, classifying them in terms of the demands they place on individuals. Hence the life events research tradition that led to measurements such as the life change units score of the "Schedule of Recent Events." This is a simple Stimulus - Response reaction in which an antecedent event leads to long-range adaptational outcomes. It is behaviorist research, with the assumption that experiences in life may cause illness. Stress, then, consists of those experiences, which may act singly or cumulatively (Lemyre & Tessier, 2003), but if they are intense or frequent enough, the individual is likely to fall "sick".

The appraisal or coping processes whereby people manage stressful events are not often studied. Where they are, the research paradigm still retains the view that life events are the stressors, and things like personality modify the link between input and outcome. More sophisticated versions of the model further posit that people have an elastic limit, beyond which resistance to stress is reduced, leading to psychological or physical damage.

The stimulus approach does not attempt to explain the wide variability in human responses to ostensibly the same stressor, nor does it handle the problem of underload, or under-stimulation. Furthermore, treating the stimulus in a mechanical manner is insufficient, since studies (e.g. Clarke,
2004) point to the importance of the meaning of the event, as distinct from the event itself. For example, hearing a telephone ring may produce a wide variety of emotional responses, according to one's expectations: a call from the airport produces a different response for the individual who is waiting for the return of the spouse, as different from the call from the hospital for a person who has to return to the hospital to be with a dying father.

In physics, there is no negative connotation; stress merely refers to the force applied to a body. Strain refers to the resulting deflection in the body: stimulus and response. It is this perspective of stress that led to Young's modulus which shows the stiffness of a material. It graphs strain (bending) for various levels of stress with different curves characterizing different materials (some, like glass, are brittle and they break without deflecting, while others like spring steel can bend greatly before breaking). It should be noted that the strain response is not linear: when a balloon is blown up, it takes a hard blow to get it started, then as the balloon starts to inflate, less puff is required, until it is almost full, and there is a need to blow harder (and with rising apprehension).

Could some of these ideas from physics perhaps be applied to thinking about people: do different people (like different materials) exhibit different strain curves as stress is increased? Are some people "brittle" and easily break under small stress and others "flexible" or resilient being able to endure a lot of stress?

**Response Model**

*Response* refers to how an individual responds to a particular stress, for example sitting an examination. Here there are two components: One is physiological in nature, manifested in heightened bodily arousal such as heart pound, dry mouth, stomach feeling tight and involuntary perspiration. The second is psychological, involving behaviour, thought patterns, and emotions. Considering stress as a response led to some of the confusion in the use of terms: originally the term "response to stressors" was used, to be shortened to the more convenient "stress response." It was then an easy step to further shorten this to "stress," thereby effectively moving stress to refer to the response rather than the stimulus. There is then a logical conundrum in explaining a person's response to stressors, which are usually defined as anything that elicits a response. The tautology of defining stress in terms of a response to something that is stressful seems an obvious risk.

According to the response model, stress should not be viewed in a purely physical sense (e.g. dryness per square centimeter); since the relation between the strength of the input and the subsequent response is not linear. Stress should be viewed not as a direct cause, but as a trigger for the organism's response, mediated via the central nervous system (CNS). Selye's (1956) contributions to the concept of stress included his emphasis on the notion that, while each input may have a unique effect, they all produce a consistent set of responses. This he termed the "nonspecific" stress response. This nonspecific response is the same whether the stimulus is pleasant or unpleasant; the response varies in intensity but not in kind. (This concept of non specific stress response can be offered as a justification for the inclusion of both positive and negative events in Holmes and Rahe's adaptation scale). Selye also emphasized that stresses cannot (even should not) be avoided. He distinguished between beneficial stress ("eustress") and harmful stress. Illness results when the body can no longer adapt to the stressful inputs, producing diseases of adaptation. This does not, however, occur in a linear fashion, nor are the thresholds for falling sick consistent across different individuals. Thus, he spoke of 'adaptation energy', a hypothetical concept that is useful in explaining why all people do not react to stresses in the same manner. Selye's major contribution lay in his work in mapping out the physiological form of the stress response.

Seligman's studies on rats contributed to freeing stress literature from a mechanistic view of stress as a stimulus - response process. According to Seligman, exposing animals to inescapable,
uncontrollable electric shocks seriously impairs the avoidance or escape behaviours of the same animals when they are re-exposed in an environment in which the shocks are controllable by the animal. It would seem to be the animal's perception of the event that makes it stressful. ‘Perception’ as used by Seligman refers to recognition and interpretation of stimuli based on the animal's memory. While an advance, there remain problems with the response-based views of stress. From Selye's ideas of non-specificity, the approach tends to treat all stressors as equivalent if they produce the same response. Can exercise, drugs, passion and surprise be considered equivalent in terms of their effect on the heart rate and other bodily mechanisms that respond to stress? Further, emotions and fatigue may be both stress responses as well as stressors. The commonest criticism of the response theories is that they ignore the perceptual processes that intervene between stimulus and response. It is still a mechanical model that fails to explain different responses in different individuals.

**Process Model**

*Process* views stress as a series of interactions and adjustments between the person and the environment. These interactions and adjustments are called transactions. Stress is not seen as a stimulus or a response, but rather as a process. The person suffering stress is seen as an active agent who can influence the impact of a stressor through behavioural, cognitive and emotional strategies. A good definition of stress in addition to the earlier ones mentioned would be that stress is the condition that results when the person/environment transactions lead the individual to perceive a discrepancy—whether real or not—between the demands of a situation and the resources of the person’s biological, psychological, or social systems.

Lazarus and Folkman (1984) proposed the transactional model which can also be taken to belong to the Process paradigm. Their model emphasizes the transactional nature of stress. In this model, stress is viewed as a two way process in which the environment produces stressors and the individual finds ways to deal with these. In finding this coping strategy, cognitive appraisal is carried out. Cognitive appraisal is a mental process by which people assess two factors: whether a demand threatens their well being or whether they consider that they have the resources to meet the demand of the stressor (Anderson et al, 2004). There are in fact two types of appraisal: Primary and Secondary appraisals.

During the primary appraisal stage a person will be seeking answers as to the meaning of a situation with regard to their well being. One of three types of appraisals could be made: (1) It is irrelevant, (2) It is good (benign-positive), (3) It is stressful. Imagine the event of a two day strike. A bank worker might consider that the strike would not affect him, as he does not have to go to work on those days being a weekend anyway. A student might consider the strike a blessing because this means that the college exam would be postponed! The situation could be stressful for a housewife because she has few supplies and she would need to get to the shops and driving would be hazardous.

Further appraisal is made with regard to 3 implications: Harm-loss (referring to the amount of damage that has already occurred), Threat (the expectation of future harm, for example the fear of losing one's job and income), Challenge (a way of viewing the stress in a positive way; the stress of a higher-level job could be seen as an opportunity to expand skills, demonstrate ability, and make more money). Much stress depends on appraisals that involve harm-loss and threat. Secondary appraisal oftentimes occurs at the same time as primary appraisal. A secondary appraisal can actually cause a primary appraisal. Secondary appraisals include feelings of not being able to deal with the problem such as:

*I can't do it—I know I'll fail*
I will try, but my chances are slim
I can do it if I get help
If this method fails, I can try a few others.
I can do it if I work hard.
No problem—I can do it.

Stress can occur without appraisal such as when someone’s car is involved in an accident and the individual hasn’t had time to think about what has happened. Accidents can often cause a person to be in shock. It is difficult for people to make appraisals whilst in shock as their cognitive functioning is impaired. (Lazarus, 1993; Thoits, 1995).

Cause Of Stress
Irrespective of the way stress is viewed or defined, the cause of stress is incontrovertible, and that is, that stress is caused by stressors. Stressors are those major events in an individual’s daily life that drains the emotions. These stressors differ by way of type, time of happening, situational context and intensity. Stressors range from such rather mundane events as being stuck in traffic, meeting deadlines, to dealing with busy schedules, experiencing conflicts with people, (e.g. family members, colleagues at work), coping with losses (e.g. death of a dear one, loss of one’s job, loss of a very valuable property etc).

An individual’s attitude towards stressors determines the response and ability to cope. Everyone sees stressors differently and has different coping skills. In the circumstance of an event happening, an individual automatically evaluates the situation mentally, assessing if the situation is threatening, thinking out ways of dealing with the situation and what skills are available to use. If the individual decides that the demands of the situation outweigh the skills possessed for dealing with it, then the situation is labeled as “stressful” and the “classic” stress response may follow. If however, in the individual’s assessment, the available coping skills outweigh the demands of the situation, then the situation is not seen as “stressful”. Everyone sees situations differently and has different coping skills. For this reason, no two people will respond exactly the same way to a given situation (Emeke, 1991)

Stress is experienced by everyone who is living, working and breathing at this moment. Stress is a fact of life which may not be avoided. All stress is not bad, and not all situations that are labeled “stressful” are negative. The birth of a new child for example, which though exerts pressure on the mother and indeed some other household members, is not perceived as threatening. Situations are considered stressful, when those experiencing them don’t feel fully prepared to deal with them. Though some situations in life are stress-provoking, it is the individual’s thoughts about the situations that determine whether they are problems to the individual or not.

How any individual perceives stress provoking situations determines the impact on health. All stress is not bad. It is important to identify how one responds to stressful events; because this will determine the impact these experiences have on one’s life. One may be motivated by some events in one’s life, or may see some as “stressful” and respond in a manner that may have a negative effect on one’s physical, mental and social well-being. A constant and regular negative response may impair one’s health and happiness. This is because such effects as tension, anxiety, depression, cardiovascular diseases (heart problem), high blood pressure, stroke and high blood cholesterol result from stress. By understanding one’s reactions to stress — provoking situations, one can learn to handle stress more effectively. When stress is accompanied by anger, negative social behaviours tend to increase (Emeke&Yoloye, 2000). Stress-produced anger increases aggressive behaviour, and these negative effects continue after the stressful event is over.
Types Of Stress

Depending on the stressors and the types of changes or events being dealt with, stress can manifest itself physically, emotionally and/or mentally.

Physical – this occurs when the body as a whole starts to suffer as a result of a stressful situation. Symptoms can manifest in a variety of ways and vary in their seriousness. The most common physical symptom is headaches because stress causes people to unconsciously tense their neck, forehead and shoulder muscles. However long-term stress can lead to digestive problems including ulcers, insomnia, fatigue, high blood pressure, nervousness and excessive sweating, heart disease, strokes and even hair loss.

Emotional – these responses are due to stress affecting the mind (Gratch & Marsella, 2004) and include anxiety, anger, depression, irritability, frustration, over-reaction to everyday problems, memory loss and a lack of concentration for any task. Anxiety is normally shown as a response to loss, failure, danger or a fear of the unknown. Anger is a common response to frustration or social stress and can become a danger to other individuals if not kept in check. Depression is frequently seen as an emotional response to upsetting situations such as the death of a loved one, illness and failure.

Psychological – long-term stress can cause psychological problems in some individuals. Symptoms include withdrawal from society, phobias, compulsive behaviors, eating disorders and night terror.

Stages In And Symptoms Of Stress

There are at least 3 major stages in stress manifestation. One, two or all of these stages with the accompanying symptoms may be experienced by an individual in response to stressful events.

Stage 1 – Mobilization of Energy Stage

In this very first stage, which is experienced by almost all people many times, all bodily activity is increased in response to a stressor that is perceived as threatening; such as a near accident. This starts the body’s “fight-flight” reaction, causing the release of adrenalin. The individual experiencing this stage may feel the heart pounding and the palms sweating. This is Primary Stress. Stage 1 may also be the result of a situation where the individual chose to put the self under stress (e.g. the night before one’s wedding). This is called Secondary Stress.

The symptoms of stage 1 stress include:

- Increased heart rate and blood pressure
- Rapid breathing
- Sweating
- Decreased digestion rate

Stage 2 – Exhaustion or Consuming Energy Stage

If there is no escape from stage 1, the body will begin to release stored sugars and fats, thereby using up its bodily resources or consuming the bodily energy, resulting in exhaustion. The symptoms of this stage include:

- Feeling driven
- Feeling pressured
• Tiredness and fatigue
• Increase in smoking, coffee drinking & alcohol consumption
• Anxiety
• Memory loss
• Acute illness such as colds

Stage 3 – Draining Energy Stage
If the stressful situation is not resolved, the individual may become chronically stressed, and the body’s need for energy resources may exceed its ability to produce them. Manifesting symptoms include:

• Heart disease
• Ulcers
• Insomnia
• Errors in judgment
• Mental illness
• Personality changes

Coping Strategies
Stress, as has been pointed out, is experienced daily by everyone, so it appears perfectly normal. However, normal does not necessarily mean healthy; nor is it inevitable. So, everyone can learn how to largely eliminate stress. This does not mean eliminate the pressures in one’s life – those will probably persist. Pressure is what is happening to the individual, but stress is how the individual reacts to those pressures. So, everyone can therefore keep the pressure but get rid of the stress. Fortunately, stress management is largely a learned skill and anyone who wishes can learn how to cope with the pressures so that they don’t become stress, or even where the stress has resulted, the effects of the stress can be ameliorated.

What follows are some skills an individual can utilize in order to cope with stress. For this writer, there are two major categories in coping strategy, with each having its subsets.

1. Assess Current Stressors and Explore Ways of Responding to Them
   • Generate a list of current events that produce stress in your life (e.g. the demands of a new position at work, demand of school, balancing priorities etc.).
   • Brainstorm how you cope with stressful experiences. Assess if you have healthy or unhealthy coping style. For example, healthy coping style include: exercise, down-time for self care, balancing work and play, managing time well. Unhealthy coping style includes: alcohol or drug use, avoidance of event, procrastination, overeating.

2. Modify Behavior
   After identifying stressors and coping styles,
   • Be aware of the physiological and emotional reactions to stress as pointed out in the stages and symptoms section of this write-up.
   • Recognize what can be changed (i.e. your reaction to stress, your internal thoughts).
   • Utilize and practice Healthy Coping Skills daily. Some of the skills which will be discussed shortly when practiced daily, (even when intense or palpable stress is not present), prepares an
individual for times when he/she may feel overwhelmed. These coping skills are discussed under the three main headings of physical skills, mental skills and social skills.

A. **Physical Skills**: these are things an individual can do with the body. This includes taking good care of the body as well as using physical techniques to help get rid of stress. The physical skills have to do essentially with Relaxation Methods. Relaxation methods work on the principle that it is impossible for one to be relaxed and be uptight at the same time. Some specific relaxation skills are:

- **Breathing Exercises**: The individual can calm the self by consciously controlling his/her breathing. Try out DEEP BREATHING which can be done anytime and anywhere. Deep Breathing provides extra oxygen to the blood, causing the body to release endorphins, which are naturally occurring hormones that re-energize and promote relaxation.

  **How?**
  i. slowly inhale through your nose, expanding your abdomen before allowing air to fill your lungs
  ii. reverse the process as you exhale

Do this exercise for 3 to 5 minutes whenever you feel tense.

- **Muscular Relaxation**: tensing and relaxing various muscle groups can work wonders.

  **How?**
  i. Sit or lie on your back in a comfortable room
  ii. Close your eyes (this is however optional)
  iii. Make tight fists, hold for 5 – 10 seconds, and then relax your hands. Do this 3 – 5 times
  iv. Pay attention to the different sensations of tensions and relaxation
  v. Repeat steps (i) – (iv) with all other groups of muscles such as the arms, shoulders, chest, abdomen, back, lower legs & feet, hips, etc.

  **N.B:** One can combine muscular relaxation with deep breathing inhaling while tense and exhaling when relaxing the muscles.

B. **Mental Skills**: these are things that an individual can do with the mind to help cope with a stressful situation. What is thought about a situation shapes one’s response to it. This makes the thoughts one of the most powerful coping skills. Mental coping skills include:

iii. **Visualization** – imagine a very peaceful scene e.g. a garden with beautiful flowers, an air-conditioned room, a riverside etc. It can be a real place, or you can make it up. Try to involve all your senses as you imagine being in this peaceful relaxing place. What do you see? What sounds are there? What sensations of touch, smell, or temperature are there? For example, you might imagine the cool breeze of the Air Conditioner on your body, or the smell of the tasty food that was served in a restaurant you had enjoyed its food.

- **Meditation**: Meditation helps settle the mind so that the individual can think clearly through after the meditation. Meditation puts a person in comfort of his/her thoughts by forcing one to be present in the moment and to observe one’s thought processes. The goal is to increase serenity. Meditate daily for about 10 – 15 minutes at the beginning and increase to about 20 – 30 minutes with time.

  **How?**
  i. Choose a quiet place where you won’t be interrupted.
  ii. Take time to relax, don’t rush into it.
  iii. When you are thoroughly relaxed and breathing slowly, close your eyes.
iv. Slowly repeat a pleasant sounding word or phrase over and over in your mind as you breathe in and out.

v. To end, begin saying your chosen word or phrase out loud, deliberately and slowly. Pay attention to your breathing. Be aware of your body and your posture.

vi. Open your eyes look around the room. After a minute or so, stand up and stretch.

C. Social, Diversional and Spiritual Skills: Social skills involve relationships. People are an important source of comfort, and it is important to spend time with them. Diversional Skills are essentially forms of distraction. These don’t require dealing with the problem directly; but are a way of taking your mind off what is happening. Spiritual Skills involve getting in touch with the self and the Creator so as to find meaning in one’s life. Tending to spiritual life is an important way of dealing with stress, particularly if one experiences a sense of loss in direction or meaning. Spirituality is not limited to religion. Time should be taken to connect with oneself and with nature.

Other Coping Measures

Other measures in coping with stress include:

i. Time management – Do essential tasks and prioritize the others. Consider those who may be affected by your decisions, such as family and friends. Use a checklist so you will receive satisfaction as you check off each job as it is done.

ii. Diet Watching – Alcohol, caffeine, sugar, fats and tobacco all put a strain on the body’s ability to cope with stress. A diet with a balance of fruits, vegetables, whole grains and foods high in protein but low in fat will help create optimum health. Nutritionists, dietitians and medical doctors can help in giving for further information about healthy eating. Good books on dieting can also be helpful.

iii. Get enough rest and sleep.

iv. Talk with others – Talk with friends, professional counsellors, support groups or relatives about bothering issues.

v. Help others – Volunteer work can be an effective and satisfying stress reducer.

vi. Get away for a while – Read a book, watch a movie, play a game, listen to music or go on vacation. Give yourself some time that is just for you.

vii. Work off your anger – Get physically active, dig in the garden, start a project.

viii. Give in occasionally – Avoid quarrels whenever possible.

ix. Take one thing at a time – Don’t try to do too much at once.

x. Don’t try to be perfect.

xi. Ease up on criticism of others.

xii. Don’t be too competitive.

Conclusion

The best ways to manage stress are to learn to change anxiety to concern and manage thought processes positively (Ritter et al, 2004). Concern means being motivated to take care of real problems in one’s life. Changing one’s feelings is largely a matter of learning to identify and change the upsetting thoughts that are the immediate and proximate cause of upset emotions (Emeke, 1991). The reason people get stressed out is not what is happening to them and not what happened in the past (at least not directly) but rather how they are thinking about them. For example, an individual who was raped or verbally abused as a child might have developed the belief and feeling
of worthlessness. It is this belief today that is making the individual feel depressed, not so much the fact of the rape or the abuse. Managing thought processes positively can result in stress reduction.

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