

## 13. Stress, Coping, and Health

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### I. The Nature of Stress

- stress is defined as any circumstances that threaten or are perceived to threaten one's well-being and that thereby tax one's coping abilities
  - A. Stress as an Everyday Event
    - stress encompasses more than major, traumatic crises; minor stresses have been found to have significant effects on mental and physical health; major stress is often more severe by causing a series of minor stresses
  - B. Appraisal: Stress Lies in the the Eye of the Beholder
    - primary appraisal is "an initial evaluation of whether an event is (1) irrelevant to the individual, (2) relevant but not threatening, or (3) stressful."
    - secondary appraisal is "an evaluation of your coping resources and options for dealing with the stress."
    - two factors that stand out as influencing one's appraisal of stress levels are (1) the controllability of and (2) the predictability of the event(s)

### II. Major Types of Stress

- stress is divided into frustration, conflict, change, and pressure
  - A. Frustration
    - defined as "any situation in which the pursuit of some goal is thwarted."
  - B. Conflict
    - defined as "when two or more incompatible motivations or behavioral impulses compete for expression."
    - approach-approach conflict - one decides between two attractive selections
    - avoidance-avoidance conflict - one decides between two unattractive options
    - approach-avoidance conflict - one decides whether or not to pursue a goal with both negative and positive outcomes (often causes vacillation: constantly changing one's decision to go forward and not to go forward with a selection)
  - C. Change
    - defined as "any noticeable alterations in one's living circumstances that require readjustment."
    - the Social Readjustment Rating Scale (SRRS) assigns a numeric value to the stress caused by 43 life changes
  - D. Pressure
    - defined as the need to meet "expectations or demands that one behave in a certain way."
    - correlates more with physiological symptoms

### III. Responding to Stress

- Reactions to stress can be analyzed at three levels: emotional, physiological, and behavioral responses
  - A. Emotional Responses
    - stress and mood are closely correlated
      - 1. Emotions Commonly Elicited
        - annoyance, anger, and rage are particularly linked to frustration
        - apprehension, anxiety and fear are associated with conflict, pressure, impending frustration, and change (stress most often invokes fear)
        - dejection, sadness, and grief are most often caused by frustration
        - this list is not exhaustive as the research included guilt, shame, envy, jealousy, and disgust
      - 2. Effects of Emotional Arousal
        - the inverted U hypothesis states that increased emotional arousal increases one's level of performance to an optimal level and then drops; low arousal is optimal for complex tasks and the reverse is true for simple tasks
  - B. Physiological Responses
    - 1. The Flight-or-Fight Response
      - defined as "a physiological reaction to threat in which the autonomic nervous system mobilizes the organism for attacking (fight) or fleeing (flight) an enemy."
      - involves the sympathetic division of the ANS
      - experiments show an immediate acceleration in breathing and heart rate with a dramatic decrease in digestive functioning
    - 2. The General Adaptation Syndrome
      - Hans Selye's experiments with animals experiencing various psychological stressors (heat, cold, etc) showed that stress reactions are non-specific
      - "The general adaptation syndrome is a model of the body's stress response, consisting of the three stages: alarm, resistance, and exhaustion."

- i. alarm: the organism first recognizes a threat; the fight/flight response begins
- ii. resistance: caused by prolonged stress, "physiological arousal continues to be higher than normal, although it may level off somewhat as the organism becomes accustomed to a threat."
- iii. stage of exhaustion: body's resources become limited; physiological arousal decreases and the organism may eventually collapse from exhaustion

### 3. Brain-Body Pathways

- two pathways exist for the brain to instruct the endocrine system to begin the fight/flight response (1) ANS; (2) hypothalamus > pituitary>secretes ACTH > stimulates outer part of adrenal glands in the adrenal cortex > secretes another set of hormones - corticosteroids > stimulate release of more fats and proteins into circulation > this increases one's energy and mobilizes chemicals that help inhibit inflammation in case of injury

### C. Behavioral Responses

- most behavioral responses involve coping - "active efforts to master, reduce, or tolerate the demands created by stress."

- coping is not always positive as it can be adaptive or maladaptive (the following is mostly a list of maladaptive coping)

#### 1. Striking Out at Others

- "Aggression is any behavior that is intended to hurt someone, either physically or verbally."
- early studies proposed that frustration always leads to aggression, newer studies prove that this generalization is problematic
- Freud coined the term "catharsis" which he defined as a release of emotional tension

#### 2. Giving Up

- associated with sadness, dejection
- learned helplessness is defined as a "passive behavior produced by exposure to unavoidable aversive events."
- Martin Seligman experimented with shocks to animals who became eventually apathetic to learning ways of avoiding the shock

#### 3. Indulging Oneself

#### 4. Defensive Coping

- this concept is based on Freud's defense mechanism, and is defined as "largely unconscious reactions that protect a person from unpleasant emotions such as anxiety and guilt."
- the individual defends him/herself through self-deception; the mechanism is both conscious and unconscious and is often unhealthy
- more healthful examples include making up for certain failures with gains in other areas

#### 5. Constructive Coping

- defined as "relatively healthful efforts that people make to deal with stressful events."
- a high correlation exists between constructive coping and physical health or success in work and social relations while little correlation exists with IQ scores

### IV. The Effects of Stress on Psychological Functioning

#### A. Impaired Task Performance

- Baumeister shows that due to greater pressure on home teams, rates of success for these teams is lower (this research is somewhat flawed as professionals are more likely to handle pressure effectively)

#### B. Burnout

- defined as "physical, mental, and emotional exhaustion that is attributable to long-term involvement in emotionally demanding situations."
- caused by mental exhaustion from negative attitudes towards aspects of life; emotional exhaustion from feeling hopeless, helpless and trapped

#### C. Post Traumatic Stress Disorders

- defined as "disturbed behavior that is attributed to a major stressful event but that emerges after the stress is over."
- commonly caused by such stresses as combat experiences, major disasters, witnessing another's death, or a near death experience

#### D. Psychological Problems and Disorders

- studies indicate that stress may contribute to poor academic performance, nightmares, alcohol abuse, drug abuse, and unhappiness
- many other disorders have been linked to stress

### V. The Effects of Stress on Physical Health

- evidence of this began to accumulate in the 30's and 40's

- Psychosomatic diseases are "physical ailments with a genuine organic basis that are caused in part by psychological factors, especially emotional distress."
- a genetic predisposition exists for psychosomatic diseases
- research in the 1970's revealed that a new string of diseases may be linked to psychological factors (heart disease, stroke, tuberculosis, arthritis, diabetes, leukemia, cancer, various infectious diseases, and the common cold).

#### A. Type A Behavior and Heart Disease

- Research in the 1960's and 70's by Friedman and Rosenman recorded a significant number of incidents in which individuals at high risk physiologically for a heart attack did not suffer one while others at physiologically lower risk did suffer the misfortune

- personality and stress explained the phenomenon

##### 1. Elements of Type A Behavior

- Friedman and Rosenman created two personality types to explain this, types A and B

- "the Type A personality includes three elements: (1) a strong competitive orientation, (2) impatience and time urgency, and (3) anger and hostility."

- "the Type B personality is marked by relatively relaxed, patient, easygoing, amicable behavior."

- research now focuses on determining which aspects of Type A behavior place an individual at greater risk than others; a strong existence exists between cynical hostility and mortality

##### 2. Evaluating the Risk

- initially very varied research concludes that Type A behavior increases the risk of a heart attack for only a portion of the population and perhaps doubles the risk

##### 3. Explaining the Connection

- (1) the frequent and sudden increases in blood pressure among such individuals wear away at the CV system

- (2) such individuals create more stress for themselves

- (3) due to their "antagonistic ways", Type A's tend to have fewer social connections to turn to

- (4) Type A's tend to practice poor health habits

#### B. Stress and Other Diseases

##### 1. Stress and Immunal Functioning

- studies link decreased immune system activity and the onset of stress in both animals (experiencing stresses of crowding, shock, etc) and humans (experiencing life's stresses as exams, deaths, etc)

##### 2. Sizing Up the Link Between Stress and Illness

- this research can only show correlations between stress and illness and may be caused by an unmentioned third factor (such as the possibility that "neuroticism may make people overly prone to interpret events as stressful and overly prone to interpret unpleasant sensations as symptoms of illness."

- many researchers have subjects make after-the-fact reports of stress and illness

- despite this, a correlation between .20 and .30 exists (not surprisingly due to the complexity of many factors that may lead to illness)

#### VI. Factors Moderating the Impact of Stress

- four key moderating variables may lessen the impact of stress: social support, hardiness, optimism, and autonomic reactivity

##### A. Social Support

- a positive correlation exists between social support and immune system strength

- even pets can provide social support and thereby decrease stress

- social bonds do not equate to social support as some aspects of social life cause even greater stress

##### B. Hardiness

- studies have compared to those that reported a great deal of stress and suffered more frequent illness to those who remain healthy while suffering from comparable stress levels

- the study concluded that the trait of hardiness is "a syndrome marked by commitment, challenge, and control that is purportedly associated with strong stress resistance."

##### C. Optimism and Conscientiousness

- optimism is defined as "a general tendency to expect good outcomes."

- one study found that optimism correlates to good physical health and another correlated optimism to lower recovery time in surgery patients

- this is understandable as "optimists are more likely to engage in action-oriented, problem-focused coping" and are more willing to seek social support, and are more likely to emphasize positive aspects in their evaluations of stressful events; pessimists tend to give up or engage in denial

- conscientiousness was also found to correlate to health as those with higher scores in this trait possessed

greater longevity despite comparable health habits to those of lower conscientiousness

#### D. Autonomic Reactivity

- some believe that those with a highly reactive ANS tend to be more affected by stress
- research in this field has focused mostly on short term laboratory stresses such as increased temperature and research is needed to study correlations with long term stress

### VII. Health-Impairing Behavior

#### A. Smoking

- most smokers also exhibit a number of other unhealthful behaviors
- quitting has about a 25% success rate and often one's chances for success increases with every attempt

#### B. Poor Nutritional Habits

- low cholesterol levels may be associated with depression, suicide, and accidents
- heavy salt and caffeine intake may increase susceptibility to hypertension
- high fat diets may increase the danger of cancer

#### C. Lack of Exercise

- exercise reduces the threat of obesity related diseases and lowers the risk from cancer
- exercise serves as a buffer from stresses

#### D. Alcohol and Drug Use#

#### E. Behavior and AIDS#

#### F. How Does Health-Impairing Behavior Develop?

- many individuals downplay the negative aspects of destructive behavior
- positive habits can slowly decline over time
- many focus on present pleasure rather than future consequences

### VIII. Reactions to Illness

#### A. The Decision to Seek Treatment

- those with higher levels of anxiety and low in self esteem are more likely to report more symptoms of the illness than others

#### B. The Sick role

- many accustom themselves to "enjoying" the "sick role"
- this tendency to remain ill provides individuals with greater attention from friends and family; such individuals may go as far as behaving in ways that inhibit their recovery to maintain this victim status

#### C. Adherence to Medical Advice

- many individuals fail to adhere to instructions from their physicians, and at times this is due to one's preference of the "sick role"
- such behavior may be due to the complexity of the instructions or negative attitudes towards the doctor

### IX. Putting It in Perspective

- many now attribute illness to stress alone while in reality, stress has a limited influence on illness along with a variety of other factors
- the experience of stress is subjective