

CHAPTER 14

HEALTH, STRESS, AND COPING

CHAPTER OUTLINE

I. HEALTH PSYCHOLOGY

The field of health psychology investigates the relationship between psychological, behavioral, and social processes and physical health. A goal of health psychologists is to apply their research to prevent illness and promote better health.

II. STRESS AND STRESSORS

Stress is the negative physical and psychological adjustment to circumstances that disrupt, or threaten to disrupt, a person's functioning. Stress always involves a relationship between people (stress reactions) and their environments (stressors). Mediating factors affect the severity of stress reactions. Examples of mediating factors include perceived control over stressors, available social support, and quality of stress-coping skills.

A. Psychological Stressors

Both pleasant and unpleasant events or situations can cause stress. Catastrophic events that are life threatening, such as assault, combat, fire, and tornadoes, can lead to serious psychological disorders. Life changes and strains can be stressors, especially if they force a person to adapt. Examples of such changes include divorce, marriage, bad grades, graduation, a new job, a promotion, and death. Daily hassles, such as minor irritations, pressures, and annoyances, when experienced regularly, can act as stressors.

B. Measuring Stressors

Several ways of measuring stress have been developed based on the premise that stress is a process that requires a person to make some sort of life adjustment. One instrument, called the Social Readjustment Rating Scale, measures stress in terms of life-change units (LCUs). Research suggests that people who experience a greater number of LCUs are more likely to suffer physical and mental illness. The Life Experiences Survey (LES), another instrument for measuring stress, also considers an individual's perceptions of the positive or negative impact of a given stressor. By examining perceptions of stress, the LES is able to measure the role that gender and cultural differences play in experiences of stress.

III. STRESS RESPONSES

A. Physical Stress Responses

The **general adaptation syndrome (GAS)** is a stress response composed of three stages.

1. **Stage 1.** The fight-or-flight syndrome (FFS), or alarm reaction, is the first stage. The sequence of events causing the FFS is controlled by the sympatho-adreno-medullary system (SAM); the hypothalamus triggers the sympathetic ANS, which stimulates the adrenal medulla, which in turn secretes catecholamines into the bloodstream. Catecholamines stimulate the heart, liver, kidneys, and lungs, thereby causing rapid breathing and increases in heart rate, blood pressure, blood sugar level, and muscle tension.

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2. **Stage 2.** Persistent stressors initiate the resistance, or second, stage, which is controlled by the hypothalamic-pituitary-adrenocortical (HP A) system. The hypothalamus triggers the pituitary to secrete adrenocorticotropic hormone (ACTH), which stimulates adrenal cortex corticosteroid secretion. Corticosteroids generate the emergency energy needed to handle stress.
3. **Stage 3.** A continual depletion of energy eventually causes exhaustion, the third stage. The body eventually succumbs to diseases of adaptation caused by damaged heart and blood vessels, suppressed immune system functioning, and prolonged strain on systems that were weak even prior to the onset of the stressor.

Psychobiological models have expanded Selye's theory of the general adaptation syndrome to include an individual's emotional state and perceptions of the stressor.

B. Psychological Responses

1. **Emotional Responses.** Most physical stress responses are accompanied by emotional stress responses. Emotional responses come and go with the onset and termination of stressors. Prolonged stress causes tension, irritability, short-temperedness, and increased anxiety.
2. **Cognitive Responses.** An inability to concentrate, think clearly, or remember information accurately is a common cognitive reaction to stress. Ruminative thinking, the persistent interruption of thoughts about stressful events, is a cause of the reduction in thinking ability. When catastrophizing, a person tends to dwell on and overemphasize the potentially negative consequences of events. Overarousal causes the normal range of attention to narrow. People under stress are more likely to use mental sets and experience functional fixedness.
3. **Behavioral Responses.** Behavioral stress responses such as a shaky voice, changed body posture, and facial expressions provide clues about physiological and emotional stress responses. Escape and aggression are common behavioral stress responses.

C. Linkages: Stress and Psychological Disorders

1. **Burnout and Posttraumatic Stress Disorder.** Burnout is a gradually intensifying pattern of physical, psychological, and behavioral dysfunction in response to a continual flow of stressors. Those experiencing burnout may become indifferent, impulsive, accident-prone, drug-abusing, suspicious, depressed, and withdrawn. Posttraumatic stress disorder is a pattern of adverse reactions following a traumatic event. The disorder may appear immediately or weeks to years after the event. Symptoms include anxiety, irritability, jumpiness, inability to concentrate or work, sexual dysfunction, and difficulty in interpersonal relationships. In rare cases, flashbacks may occur.

IV. STRESS MEDIATORS: INTERACTIONS BETWEEN PEOPLE AND STRESSORS

Mediating factors include individual and stressor characteristics and the circumstances under which stressors occur.

A. How Stressors Are Appraised

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Those who perceive a stressor as a challenge rather than a threat experience fewer and less intense negative stress consequences. Cognitive factors are less effective as the intensity of a stressor increases.

B. Predictability and Control

Intense but short stressors have a smaller negative impact if people perceive them as predictable and controllable.

C. Coping Resources and Coping Methods

Coping resources include time and money. Coping methods are either problem-focused or emotion-focused.

D. Social Support

A social support network—friends and family who lend support during stress—can greatly reduce the impact of stressors. Too much support, however, can inhibit a person's attempt to cope with stress.

E. Stress and Personality

Dispositional optimism, or the expectation that things will work out well, is associated with fewer illnesses and faster healing. People who do not blame themselves and who think of stressors as temporary tend to suffer fewer stress-related problems.

F. Focus on Research Methods: Does Personality Affect Health?

A study that followed gifted children for seventy years showed a relationship between social dependability and longer life. People whose parents had divorced or who had unstable marriages themselves died an average of four years earlier than those whose parents hadn't divorced or who had stable marriages.

V. THE PHYSIOLOGY AND PSYCHOLOGY OF HEALTH AND ILLNESS

A. Stress, the Immune System, and Illness

Psychoneuroimmunology is the field that studies the interaction of the psychological and physiological processes that affect the body's ability to defend itself against disease.

1. *The Immune System and Illness.* The immune system defends the body against foreign substances and microorganisms. An active immune system has many components: the leukocytes, called B-cells and T-cells; the antibodies produced by B-cells; the natural killer cells; and macrophages. Stress-related psychological and emotional factors affect the immune system through the central and autonomic nervous systems and through the endocrine system.
2. *The Immune System and Stress.* People who are stressed are more likely to develop infectious diseases and to show reactivation of latent viruses (such as AIDS) because of immune system suppression.
3. *Moderators of Immune Function.* Social support can reduce the impact of stress. Some research suggests that stress is attenuated when a person with adequate or better social

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support has an opportunity to express pent-up thoughts and emotions. Even anonymous disclosure is associated with fewer health center visits.

B. Heart Disease and Behavior Patterns

People exhibiting the response pattern of cynical hostility are suspicious, resentful, frequently angry, antagonistic, and distrustful of others. Cynical hostility is a risk factor for coronary heart disease and myocardial infarction (heart attack).

C. Thinking Critically: Does Cynical Hostility Increase the Risk of Heart Disease?

What am I being asked to believe or accept?

People with cynical hostility are more at risk for coronary heart disease and heart attack.

What evidence is available to support the assertion?

Cynical hostility is associated with an increase in the time needed to return to a resting level of sympatho-adreno-medullary (SAM). Increased sympathetic nervous system activity causes the release of stress-related hormones that are damaging to the heart.

Are there alternative ways of interpreting the evidence?

Genetically determined autonomic reactivity may make both hostility and heart disease more likely.

What additional evidence would help to evaluate the alternatives?

Further research will have to take into account the possibility that biological predisposition may lead to oversensitive reactions to stress, which lead to heart disease. Also, hostile behavior may cause people with cynical hostility to encounter more stress; hostile people are more likely to smoke, drink, and overeat, and are less likely to exercise.

What conclusions are most reasonable?

Although most researchers continue to find that hostile individuals have a higher risk of heart disease and heart attacks than nonhostile individuals, many interacting factors appear to affect the relationship between hostility and heart disease. And because this relationship is not universal, further research must also examine the impact of gender, culture, and ethnicity on hostility and heart disease and heart attack.

D. Risking Your Life: Health-Endangering Behaviors

Many of the major health problems in Western culture are either caused or increased by behaviors that can be changed.

1. *Smoking.* Smoking accounts for more deaths than drugs, car accidents, suicides, homicides, and fires combined.
2. *Alcohol.* Abuse of alcohol contributes to irreversible brain damage and gastrointestinal illnesses as well as to heart disease, stroke, cancer, and liver disease.
3. *Unsafe Sex.* Practicing unsafe sex greatly increases the risk of contracting HIV.

VI. PROMOTING HEALTHY BEHAVIOR

Health promotion is the process of altering or eliminating behaviors that pose health risks and at the same time encouraging healthy behavior patterns.

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A. *Health Beliefs and Health Behaviors*

Irwin Rosenstock's health-belief model is based on the assumption that people's decisions about health-related behavior are guided by four main factors: perceived personal threat of illness; perceived seriousness of illness; belief that a particular behavior or health practice will reduce the threat; and balance between health practice cost and perceived benefits. In addition, people need to believe that they can change their behavior, which is known as self-efficacy.

B. *Changing Health Behaviors: Stages of Readiness*

Successful adoption of health practices involves five stages: precontemplation, contemplation, preparation, action, and maintenance. A smooth transition from one stage to another is enhanced when a decisional balance is achieved—that is, when the pros outweigh the cons of the decision.

C. *Programs for Coping with Stress and Promoting Health*

1. *Planning to Cope.* People who are able to adopt problem-focused coping skills and recognize which stressors can and can't be changed are better equipped to cope with stress and are more likely to escape its negative consequences. Those able to adjust their coping strategies to the stressor are most successful.
2. *Developing Coping Strategies.* Strategies for coping with stress can be cognitive (cognitive restructuring), emotional (social support), behavioral (such as time management), and physical (progressive relaxation training).

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CHAPTER OBJECTIVES

1. Define health psychology. List the objectives of health psychologists.
2. Define stress, stressors, and stress reactions. Give examples of stressors. Be sure to include a catastrophic event, a life change or strain, chronic stress, and a daily hassle.
3. Describe the Social Readjustment Rating Scale and the Life Experience Survey. Explain how they are used to measure stress.
4. Define general adaptation syndrome. Describe the three stages in this syndrome, and discuss the physiological processes underlying it. Define disease of adaptation.
5. Discuss the major criticisms of Selye's model.
6. Describe some common emotional, cognitive, and behavioral stress responses. Explain how ruminative thinking, catastrophizing, mental sets, and functional fixedness are linked to stress.
7. Define burnout and posttraumatic stress disorder, and describe the conditions that can lead to both.
8. Explain why the appraisal of stressors, their predictability, and a feeling of control can reduce the impact of stressors.
9. Discuss the role of coping resources and methods in combating stress. Give examples of problem focused and emotion-focused coping strategies.
10. Describe the effects of social support networks on the impact of stressful events.
11. Describe disease-resistant and disease-prone personalities. Define dispositional optimism. Discuss the quasi-experimental research on the relationship between personality and health.
12. Define psychoneuroimmunology.
13. Describe the components of the immune system. Discuss the relationship among the immune system, the nervous system, the endocrine system, and stress.
14. Define cynical hostility and outline the evidence relating hostility to heart disease.
15. List the health-endangering behaviors described in your textbook.
16. Define health promotion. Describe the four factors in Rosenstock's health-belief model. Explain the role of self-efficacy in altering behavioral health risks.
17. Describe the five stages in changing behavioral health risks.
18. List the steps in a stress-coping program. Explain the importance of being able to recognize the difference between a changeable and a nonchangeable stressor.
19. Describe cognitive coping strategies. Define cognitive restructuring.
20. Describe some emotional and behavioral coping strategies.
21. Describe physical coping strategies. Explain the possible problems of using drugs to alter stress or stress responses. Explain how progressive relaxation training can help people cope.